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Emotional and Behavioural Difficulties (EBD) among adolescents in Brunei: Can the SDQ and YSR be helpful in identifying prevalence rates?

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DECLARATION

This is to certify that that the work contained within has been composed by me and is entirely my own work. No part of this thesis has been submitted for any other degree or professional qualification.

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ABSTRACT OF THESIS

In most epidemiological studies, one in every five children and adolescents are said to display Emotional and Behavioural Difficulties (EDB), with greater risk of school and wider social exclusion (Brauner & Stephens 2006; Costello, Egger & Angold 2005). Although no formal statistics are currently available with regards EBD in Brunei, there was a formal report stating that quite a number of young people are now being referred to professionals for assistance and support for EBD. There is currently no assessment tool for EBD in Brunei and no 'Brunei Malay' translation for most of the Western design measures. Although some of these measures have Malay translations, it was formally back-to-back translated among professionals from Malaysia, who are known to speak slightly different standard Malay language than those Malays who reside in Brunei. Despite the differences in some technical language, Malays in Brunei and Malaysia share a very similar culture and geography.

The aim of this study was twofold, to explore the responses of parents, teachers and adolescents in Brunei using the translation of the Western designed assessment tool for EBD as well as to determine how useful the original subscales of those measures are in reporting problems associated with EBD in Brunei Darussalam, a Malay speaking country based in the South East Asian region.

A single phase cross sectional survey of 11-16 year-old adolescents attending mainstream public (i.e. government) schools in Brunei was carried out. Responses of parents and teachers were measured using the Strength and Difficulties Questionnaires (SDQ) and a subsample of the participants received a second copy of Child Behaviour Checklist (CBCL) and Teacher Report Form (TRF) of Achenbach measures. Responses from adolescents were measured using the Youth Self Report (YSR) of Achenbach measure. In total, responses were obtained from 396 parent version SDQ and 92 parent version of CBCL; 329 teacher version of SDQ and 71 teacher version of TRF; and 282 adolescent Youth Self Report (YSR) were obtained for analyses.

Results indicated that there are some differences in the three different groups of respondents in Brunei in relation to the identification of EBD and that this differed

somewhat from Western population studies. It is suggested that this may be due to differences in interpreting behavioural norms and that this might be linked to cultural differences. It was found that the YSR did not produce factor structure like that of the original study and this might indicate necessary refinement to ensure better fit as revealed by the psychometric analyses. Teachers' responses to the SDQ items were more similar to those of teachers in other evaluation of the SDQ, whilst parents differed more in their responses when compared to those of Western respondents. Despite the clear differences in their responses when describing EBD using these Western measures, exploration of other statistical tests offered some possible reasons for continuing using the measures to report the prevalence of the problems. Previous studies have also highlighted some critical insights into the use of the measures in other cultures, which are discussed in the finding of this study. Some age and gender differences also appeared in responses, and there were a tendency for parents and adolescents in Brunei to report higher Total Difficulties Score (TDS) among girls than boys. The cut-off scores that were adjusted based on the criteria advocated by the founder of these measures indicated slight differences in the level of point describing the clinical range. This again served to highlight the possible cultural behavioural expectation that varies from one country to another.

This exploratory study suggests that reporting a prevalence rate of a given culture using a measure that was designed elsewhere might pose risk of wrongly describing problems of a particular nature without investigating the way in which it has been understood by the respondent. The study stresses that it is important to understand cultural determinants of respondents when reporting EBD of adolescents and points out the necessity of planning and networking across social context to meet young people mental health needs.

LAY SUMMARY

A number of young people who do experience emotional and behavioural difficulties are at potential risk of school and wider social exclusion. In Brunei, there is no formal statistics currently available with regards to adolescents' difficulties; however, a formal report stated that quite a number of young people are now being referred to professionals for assistance and support with their emotional and behavioural difficulties. One of the main reasons for the absence of systematic reports regarding these issues is the lack of reliable and valid assessment tools to identify the widespread of emotional and behavioural difficulties among adolescents in Brunei.

The available research on providing evidence on the usefulness of the assessment tool has greatly focused on samples from the Western general populations. The experience of going through adolescence transitional stage may differ when placed in non-Western cultures. It is known that culture is thought to influence socially transmitted behaviours, in the form of cultural practices. Hence it is possible that what might be seen as normal behaviour in one culture might be interpreted as a problem in another culture.

The differences in interpreting behavioural norms might also influence the use of Western assessment tools when employed in a non-Western culture. This is seen in studies which explored the structure of the Western measures, using the statistical analysis, and found that some items on the assessment tools did not represent similar problems as predetermined when used with samples from the Eastern cultures. Hence the aim of this study was twofold, to explore the responses of parents, teachers and adolescents in Brunei using the translation of the Western designed assessment tool for emotional and behavioural difficulties as well as to determine how useful the original predetermined scales of those assessment tools are in reporting problems associated with emotional and behavioural difficulties in Brunei Darussalam, a Malay speaking country based in the South East Asian region.

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LIST OF ABBREVIATIONS

BERA	British Educational Research Association
BPS	British Psychological Society
CBCL	Child Behaviour Checklist
DHHS	Department of Health Human Services
DSM	Diagnostic Statistical Manual
ICD	International Classification of Diseases
MOE	Ministry of Education
SDQ	Strength and Difficulties Questionnaires
TRF	Teacher Report Form
YSR	Youth Self Report
WHO	World Health Organization

CHAPTER 1
PSYCHOLOGICAL MEASURE OF EMOTIONAL AND BEHAVIOURAL DIFFICULTIES (EBD) IN ADOLESCENTS

1.1 Introduction

This thesis reports research that aims to investigate the prevalence rate of emotional and behavioural difficulties among adolescents in Brunei using Western designed tools. This study design involves exploring the psychometric properties of a translated version (Malay) of the Strength and Difficulties Questionnaires (SDQ) and the Youth Self Report (YSR), as well as considering the wider educational and cultural implications of use of psychological measures of this nature.

Brunei, a small country located on the north-western coast of Borneo Island (facing the South China Sea) has a majority of the population who are Malays (66%), followed by Chinese (10%), and the remaining 24% are made up of indigenous groups and other races (Brunei Darussalam Economic Development Board, 2012). Since the majority of the people in Brunei are Malay, the official religion is Islam and the Malay Language (Bahasa Melayu) is the official medium. English is also widely spoken in Brunei as a result of the country's bilingual policy (introduced in 1984) that emphasised the use of English as the language of instruction during the early years of formal education. The population of Brunei was estimated at 422,678 (in 2016 with an annual growth of 1.4% annually) of which 33% were below 19 years of age.

In conjunction with the World Mental Health awareness campaign in 2012, the Minister of Health (MOH) shared his concern over the wellbeing of Bruneians and stated that integration practices will be implemented with a view to provide assistance for those who are in need. One of the problems highlighted in the issue was the rate of children and adolescents in Brunei who were suffering from emotional and behavioural problems (Borneo Bulletin, 2012). In the case of Brunei to date, there is no epidemiological study in Brunei on this issue; systematic reports emotional and behavioural related problems among children and adolescents are scarce. At present there are no formal studies that have been conducted to provide data, in relation to the mental health status of Bruneian children and adolescents that could offer valuable insights for practice. The only formal report received has shown that 429 children and

adolescents have registered with the mental health clinics since 2006 (Borneo Bulletin, 2011). It was not stated how much the rate has increased since, but the emotional and behavioural problems among children and adolescents reported were mostly internalising (troubled emotions and feelings) and externalising related problems such as disturbed and antisocial behaviours). One of the main reasons for the absence of systematic reports regarding these issues is the lack of reliable and valid measures to identify the prevalence rates of emotional and behavioural problems among adolescents in Brunei. Hence this study aims to provide preliminary evidence of the usefulness of some of the Western psychometric assessment tools in identifying the prevalence of emotional and behavioural difficulties.

There is evidence on the number of assessment tools used in studies to assess emotional and behavioural difficulties among adolescents across different countries (Roberts, Attkisson & Rosenblatt, 1998). For instance, an intensive review across 52 epidemiological studies concluded that a great deal of variation exists (1-51%) in reporting for prevalence rates with a mean of 15.8%. Up to their latest review of the use of assessment tools during the 90s, beside using interviews, structured questionnaire type was by far the most popular data gathering tools and this is deemed practical in most epidemiological studies for specifying the rates and distribution of emotional and behavioural problems in the general population (Muris, Meesters & van den Berg, 2003). However, in most epidemiological studies, information on EBD across countries is not always comparable, because the term EBD sometimes depends on the resources available that will also determine the level of Human Developmental Indexes (HDI) of those countries. The United States, for instance, is acknowledge as having one of the best developmental indexes (Cameron et al., 2011); which usually provides international agencies with extensive information about issue such as identification procedures, categories, support systems and funding. In contrast, countries with low to medium human development indexes typically show difficulties in gathering information, or cannot even get the information required by those international agencies (OECD, 2005). This differentiated in the HDI could possibly be one reason for the current absence of valid statistics currently in Brunei. Another significant difference between countries with different levels of development has to do with the acceptance of the concept of EBD itself. Since the notion of EBD is based on the idea of a deviance against a norm or social pattern (Mesquita & Walker, 2003),

these norms are thought to vary widely from culture to culture and with time. Additionally, Mesquita (2007) contends that most definitions of emotion for instance, reflect Western emotional models and do not represent for Eastern cultures. For instance, studies looking at committing social offences (Kitayama et al., 2000; Idzelis et al. 2002), found that while American participants focused on the importance of the offender restoring self-esteem and regaining self-control within the offender, Japanese participants were directed towards the offenders' point of view and tried to minimise issue. The differences in the restoration practices highlight that the concept of EBD is therefore not internationally standardised or agreed upon.

Culture is thought to influence socially transmitted behaviours through cultural practices as well being a medium of understanding the world and oneself, in terms of expectations and normative behaviours (Matsumoto, 2006b). The population of Malays can also be found in the neighbouring country of Malaysia, where it was estimated as many as 51% are Malays. The standard Malay language is said to have many similarities in both Malaysia and Brunei (Aini, 2009); however in Malaysia their standard dialect is referred as the Malaysia language (Bahasa Malaysia). Variation in the standard dialect have led to some spoken terms in Brunei to differ in meaning in comparison with some terms described in Malaysia. However, Brunei's blend of cultures, customs and beliefs is still very similar to that of Malaysia. While we can anticipate some behaviour expectation to be closely related between Bruneian and Malaysian communities, some general acceptable norms are also commonly shared within the communities in this Asian region. For instance, Asians would expect young people to value interdependence, refrain from showing dissatisfaction and anger. Most importantly they would be expected to prioritise the needs of others before fulfilling their own needs, characteristics known to be highly collectivist. This culture was previously reported in a study by Hofstede (1983), where neighbouring countries to Brunei such as Malaysia and Indonesia were seen to be more collectivist in nature. While 10 Asian countries were surveyed by Hofstede, Brunei was not included in his sample. Since Brunei is surrounded by most of these Asian countries, it is therefore axiomatic that Brunei's culture would also fall into the collectivist dimension (Black, 2001). However, this proposition is appearing to be mostly suggestive and conjectural in nature. For instance a few years after Hofstede's study, Blunt (1989) found that the work related values in an organisation based on his nine

period interview and observation suggested a low individualism culture in Brunei, which is not surprising. Until today, Brunei is known to favour group values and collectivist mores, which are deeply entrenched, and therefore independence and individualism are less emphasised (Arnett, 2000). This customary behaviour expectation is often in contrary to the behaviour evident in Western culture, where the majority of societies would expect their young people to be more independent, to be more expressive of their own feeling and to prioritise their goals before helping others, characteristics thought as highly individualistic. However, this "common view" (i.e. collectivist in the East and individualistic in the West) might not always present a clear line between the Eastern and Western cultures. This was evident in the quantitative ranking system developed by Hofstede, where China (Hong Kong) ranked number 35 out of 50 countries for individualism, with a score of 25 on the Individualism-Collectivism index reflecting low levels of individualism and high levels of Collectivism (Matsumoto & Juang, 2008). Triandis (1995) highlighted that the scores reflect how countries can embody both individualism and collectivism, or primarily individualism, or primarily collectivism along a spectrum. Consequently, different culture might vary much or only slightly in their values and practices which later inform differences in the acceptable developmental norm which might vary across cultures.

Studies have also shown that prevalence rates of emotional and behavioural difficulties from both collectivist and individualist cultures resulted in mixed findings. Rescorla et al. (2007) conducted a robust review using parallel analyses from 31 societies: 12 from Western Europe, 5 from Eastern Europe, 6 from Asia, 1 from Africa, 3 from the Middle East, 2 from the Caribbean, plus Australia and the United States. Cultural factors did not seem to provide clearly discernible effects on their mean 'total problem' scores when comparing societies considered to be either highly individualistic or highly collectivistic. Despite the known cultural differences in those cultural dimensions, we know that a number of young people who do experience issues of Emotional and Behavioural Difficulties (EBD) are likely to have low self-esteem, lack motivation, lack concentration, experience difficulties with learning, have poor interpersonal skills and experience more feelings of hopelessness (Hamill & Boyd, 2002b:92). Although across culture EBD is difficult to define, it is clear that

young people with EBD are at particular risk of school and wider social exclusion. (Tobbell & Lawthom, 2005).

Currently, particularly within the Asian region, the two most commonly used Western measures are the SDQ and the Achenbach measures (Leung & Wong, 2003). These two measures have also undergone formal back-to-back Malay translation of the original English version by professionals from Malaysia. Since at present there is no Brunei Malay translation, the available Malay translation is used in this study. This adoption is feasible as it has been shown that the majority of Bruneian understand the standard dialect of Malaysia while not many Malaysian could understand the dialect Malay Brunei (Aini, 2009) Additionally, only the Achenbach measures had a Malay translation for 3 different groups of respondents; i) parents, ii) teachers and iii) adolescents. With the SDQ, the Malay translation was only available for parents' and teachers' reports. Email correspondences by the researcher with the SDQ developer, Professor Goodman (1/10/2012) indicated that it would be a legal breach of the SDQ copyright if a similar version of SDQ was adapted for use with the self-rated measure (see appendix A). Hence it was not possible in this study to explore adolescents' responses using the SDQ.

The recognition of cultural differences across countries has led to several studies looking into exploring the factor structure of Western designed tools, such as the SDQ and Achenbach questionnaires) when used within an Asian context (Mellor, 2007; Woerner, Nuanmanee, Becker, Wongpirosam & Mongkol, 2011). However, it was found that in a country like Brunei, the use of the SDQ and Achenbach questionnaires for assessment continued without any formal judgement of its existing factor structures. This information was obtained through formal correspondence by email with a clinical psychiatrist (see appendix B) and direct communication with an educational psychologist in Brunei. Within the Asian region, SDQ has received more attention than the Achenbach questionnaires in exploring their factor structure. Apart from the review by Leung & Wong (2003), no other studies have reported evidence relating to factor structure analyses within this region. Scarcity makes it more relevant to use the existing Malay translation of both the SDQ and Achenbach questionnaires (in particular the YSR) for this study. This approach will allow the researcher to examine whether using the SDQ and YSR in the Malay culture of Brunei produces

similar recognition of the problems as identified when used in Western culture. The continue adoption of measures would also question some studies (Salwina, Ruzyanei, Nurliza, Irma, Hafiz, Lew, Rozhan & Iryani, 2013; Chu, Thomas & Ng, 2009), which tend to report the existing difficulty scales of YSR without exploring the existing factor scales in relation to the characteristics of the study's population. It was evident in present studies Woerner, Nuanmanee, Becker, Wongpirosam & Mongkol, 2011; Du et al., 2008) that some cultural influences have caused some items on the Western tools to be viewed differently from the original studies. Some items were either seen as reflecting different problems or were not recognised as problem within the culture). This confusion inevitably supports the views about some cultural values that have shaped differences in the way EBD is defined. Since it is less likely for Eastern samples to produce replication of exact factor scales matching most Western samples, many studies would continue to report the internal consistencies and validity of the original factor scales. This statistical support is to provide additional justification on the usefulness of reporting difficulties according to the concepts of the employed measure. Accordingly, this current study will present the first preliminary findings from exploring how respondents in Brunei responded to the EBD using the Malay translation of SDQ and YSR. In addition to that, the existing subscales of those measures would also be explored further for their reliability and validity of their Brunei'ssupport in extending their usefulness in reporting EBD in another culture.

In order to observe how emotional and behavioural difficulties are described in Brunei based on the chosen measures, this thesis will investigate the function of the SDQ and YSR in reporting EBD among adolescents. Data will be gathered drawing on the views of parents, teachers and those adolescents who are still in school. The thesis will explore any age and gender effects that may influence the ratings of adolescents' EBD. This research adopts a cross-sectional design that reports patterns of association from a quantitative approach. This includes applying psychometric theory that is concerned with the construction and validation of the measurement, thereby offering a central framework for conceptualising the properties of quantitative measures. Drawing from the above discussion, empirical evidence suggests the need for further testing of the psychometric properties of SDQ for parents and teachers, including exploring the measure of YSR among adolescents. This initiative is crucial

as there is a great need to gather data from representative samples in the Asian region (Woerner et al., 2004).

This thesis is comprised of eight chapters. Chapter One will focus on the general constructs for assessing psychological difficulties that looks initially at issues on the terminology and definition of EBD. It will then focus on a review on the prevalence rate of EBD, to the chosen measures of this study; a review on their function and theoretical development of those measures. Chapter Two will focus on the review of impact of culture on the development of acceptable norms across cultures and the how different cultures recognise problematic emotional and behavioural development. This second literature review will link closely to the third literature review (Chapter Three), with emphasis on a review of how parents, teachers and adolescents provide their responses in identifying Emotional and Behavioural Difficulties (EBD) using Western measures such as the SDQ and YSR. Chapter Four introduces the methods used in this research. Chapters Five, Six and Seven provide the findings of the psychometric properties of the Malay version of SDQ, chapters explore if there is any age and gender effect in the reports of parents and teachers, and finally the cut-off scores for reporting the recommended norm are analysed. In Chapter Eight, the main findings of this thesis are synthesised and discussed with regards to the result themes. The chapter concludes with a discussion on the implication and limitations of this study, as well as offering and suggestions for future studies.

1.2 General measures for assessing emotional and behavioural difficulties among adolescents.

At the outset, it is important to recognise the different terminologies used to designate young people who show behaviour or symptoms that are socially unacceptable. The terms Emotional and Behavioural Difficulties (EBD), Social Emotional and Behavioural Difficulties (SEBD), Behavioural, Emotional and Social Difficulties (BESD) have developed over time and have been used inter-changeably in the literature in the education literature. In this thesis, the term Emotional and Behavioural Difficulties (EBD) is used to refer to such difficulties experienced among young people. Within this thesis, it is not the intention to discuss either the merits of each of these contested interpretations, nor the evolving development of the terms, including the broader philosophical debates concerning the issues of labelling in

schooling. However, it is important to note that there are different perspectives on EBD, which relate to disciplinary differences. This section begins reviewing different viewpoints that exist when explaining the causes of emotional and behavioural difficulties and how these perspectives can influence how we respond when dealing with such difficulties. The section will further examine the two broad characteristics of EBD and relate the to an examination of issues relating to EBD among adolescents.

1.2.1 Terminology and definition of EBD

Various terminologies and definitions have been used to describe young people's emotional and or social behaviours that are not socially acceptable, and which are known to have social and wider educational detrimental effects. EBD is an imprecise umbrella term, not easy to define and classify, even though it has existed for some time (Cooper, 2010). The lack of consensus regarding the contested terms largely explains the presence of different theoretical views of how such behaviours develop. The conceptualisation of EBD is also complex because the term is drawn from a wide range of theoretical bases including a) educational-therapeutic approaches, b) social models, c) mental health models and d) biologically-based perspectives (Norwich, Cooper & Maras, 2002).

Having said that, the controversial question is "*who may be identified as having EBD?"*. In England, the term EBD had replaced a more stigmatising and unsatisfactory descriptor in the 70s when terms such as 'maladjusted' and 'maladjustment' were employed. The government's circular 9/94 contained another vague 'catch-all' definition:

> 'Emotional and behavioural difficulties range from social maladaptation to abnormal emotional stresses. They are persistent (if not necessarily permanent) and constitute learning difficulties. They may be multiple and may manifest themselves in many different forms and severities. They may become apparent through withdrawn, passive, aggressive or self-injurious tendencies' (DfEE 1994: 7).

However, there continues to be a lack of clarity about which particular group of children and which behaviour constitutes EBD when referring to any general

discipline problems. At the other extreme there exist lack of clarity as to whether behaviour difficulties in school indicate some underlying mental health problems that might require either medical or psychiatric attention. However, in some cases there is a relatively clear distinction between emotional and behavioural difficulties and more deep-seated mental health problems that call for psychiatric attention (Atkinson & Hornby, 2002). Following this notion in recent guideline, the UK government now has acknowledged that there exists some overlap between groups of children with EBD and those who have mental health problems (DfES, 2001).

Another important source of information about students with emotional and behavioural difficulties and other corresponding labels from around the world comes from the Organisation for Economic Co-operation and Development (OECD). It is important to acknowledge that the OECD works with experts from different countries in an effort to reformat or to regroup national categories/conditions in the three cross-national categories defined by the OECD experts' committee (Category 'A/Disabilities'; Category 'B/Difficulties'; Category 'C/Disadvantages'). As a result of these categories, it is less likely for some homogeneity to exist across countries. Most countries do not even use the term EBD, but continue to refer to categories that are usually under the umbrella of EBD, and include them in OECD Category B (Lopes, 2013). For instance in Brazil, EBD is defined as 'typical manifestations of syndrome behaviour and neurological, psychological or psychiatric conduct which cause delays and damages in the development of social relationships at a degree that requires specialised educational assistance'. In the United States, a long, but not too different definition is in use. The condition includes schizophrenia but excludes socially maladjusted children, which seems contradictory in the context of the category itself and has received some criticism (Kauffman & Landrum, 2013).

Although EBD has been defined in different ways with different terminologies, some common features can be extracted from the definition. In summary, behaviour may be defined as EBD if the behaviour is socially or culturally unacceptable, and can cause detrimental effects influencing the child's own development and/or the lives of others.

However, such behaviour could be found in all young people at any age across different cultures but if it is seen to appear more frequently than usual and it does not disappear quickly, then the child may be identified as having EBD.

1.2.2 Etiology of EBD

Within the theoretical and empirical literature, there are differing views on EBDs, which can be located within three main approaches: i) medical, ii) psychological and iii) social/societal model (Maras & Kutnick, 1999). These different perspectives of the etiology of unacceptable behaviour can be broadly grouped into two categories: a) internal views within the individual (such as the biophysical or psychodynamic theory) and b) interactional views between the individual and the environment (such as behavioural and ecological theory).

It has been argued that almost all terms that have been used to describe difficulties in EBD implied problems within the child and treatment which focused on the child (Cooper, Smith & Upton, 1994). This has led to children being described as maladjusted, disturbed or disruptive. The medical model which often interpreted problems and described them as "disorder", would emphasise difficulties that existed within the child and was thus seen as a function of psychopathology. Here, medical professionals would not use the same overarching title of EBD or SEBD, but instead used a large number of diagnostic categories. Kaufmann (2002) in his seminal work pointed out that in America the term "difficulties" was not used to refer to problems concerning children and youth but instead reference was made to 'Emotional and Behavioural Disorders'. Even Kurtz, Thornes and Wolkind (1995) reflecting a medical lens, prefer to use the word 'disorder' to difficulties or 'problems'. For instance, the term 'emotional disorder' is used to describe a state of anxiety, depression related problems and phobias. These categorical approaches referred to as: a) categorical, b) medical and c) narrow band are based on the presence or absence of symptom clusters such as those described in the Diagnostic Statistical Manual of Mental Disorders (DSM-5, 2013) produced by the American Psychiatric Association, and the International Classification of Disease (ICD-1, 2007) produced by the World Health Organisation (WHO). However such an approach to classifying a young person has become increasingly controversial, mainly through the stigmatising effect

of diagnostic labels, combine with the disproportionate rate of diagnosis among the minorities (Recchhly, 1998). Nonetheless, there are some exceptional cases, with the widespread agreement that stimulant medication ameliorates the symptoms associated with ADHD. However, such medication does not treat the cause of ADNH but they do not treat the cause as the cause of ADHD is generally unknown (Agency for Health Care Policy and Research, 1999).

On the other hand,, the same problem of ADHD might be viewed as a socially created behaviour (Forness & Kavale, 2001). This idea could be traced back to another related term by Galloway and Goodwin (1987), which at that time would refer to such children as 'disturbing'. Deviant behaviour of a child was defined by the effects of the behaviour on others, rather than the psychological or social characteristics of the child. That is, the child may be identified as disturbed because s/he has disturbed others. Within this scope it has to be recognised that what one person describes as 'disturbed behaviour' will not necessarily be seen as disturbed behaviour by another person. This categorising was earlier criticised by Ravenette (1972), where a child can be labelled as deviant from the perspective of their school's needs rather than the child's own needs. This is akin to social learning theory (Bandura, 1977), which proposed that deviant behaviours identified as EBDs are reinforced in the social environment. While there is some evidence that external factors can affect the development of EBDs, such behaviour cannot be explained by the mere presence of a reinforcing contingency in a student's life. The reinforcement has to be persistent over time and across situations, to result in the development of EBD. As proposed by Schaffer (1990), it might be that it is the permanence of psychological trauma for a student that can possibly result in the formation of EBDs, or rather the labels of EBD being applied. Outcome has been seen where some adolescents continued rejection and withdrawal from the peers or just the expression of behavioural difficulties may be sufficient for any young person to be noted as being "different' from the norm (see discussion by Brodzinsky, David, Schechter, Diane, Braff, Anne & Singer, 1984).

The other approach in understanding the etiology of EBD that has a closer link to the medical model is the psychological approach. The psychological perspective focuses on explaining the causes of child's psychological problems of the child within their context. Such interplay is important, for example the 'within child' and environmental

correlation and interaction play an important part in adolescent depression (Caspi, Hariri, Holmes, Uber & Moffit, 2010). There is some common ground between the predominant medical and psychological approaches, which educational psychologists and teachers are more likely to draw upon (see review by Maras & Kutnick, 1999). However educational policy and interventions are most likely linked to the filed of psychology, drawing upon social behavioural/social learning (principles founded by Bandura, 1977) and ecological models (Bronfenbrenner 1979). The psychological perspective upholds that a child's biological predisposition is always mediated by this environment; that is the cultural, social and political circumstances that the child encounters at home, in school and the wider community. Such factors interact with each other and with the child's predisposition. In particular, the child's predisposition towards EBD can be amplified and consolidated or reduced (Hill, 2002). It is important to stress that presence of biological factors should not be taken as indications of a 'biological' cause. According to biopsychosocial approach (Engel, 1977), biology is always seen to interact with the environment, so biological attributes which affect behaviour are often mediated by experiences encountered in the environment. For example, this perspective has led to important advances in understanding how psychological well-being tends to protect against illness (Ryff & Singer, 1996).

Many psychological explanations however do not look for physical explanations. A few distinctive characteristics uphold the psychological orientation. Firstly, general views of problems are seen as emerging out of difficult early life experiences that are not recognised and which lead to problems during adolescent years. Secondly, psychological explanations are highly individualistic. While problems may seem to be similar across many individuals, a different set of factors may be at work for each person. Finally, it is also viewed that the individual orientation has led to the emphasis on working with individuals who are already having problems, rather than those who will have the potential to become deviant (Whitehead & Lab, 2015).

Generally, EBD across different perspectives acknowledge that the difficulties should be persistent and frequent, with severe emotional and behavioural problems occurring within or across particular settings (Ayers & Prytys, 2002). This perception also seems to imply that across perspectives, the detrimental effects of EBD are best

understood by either recognising them as internalised or externalised. Internalised difficulties are more likely to have detrimental effects on personal well-being such as loneliness, social withdrawal, anxiety and depression or by inhibiting appropriate social interaction. On the contrary, an externalised difficulty is more likely to link to the detrimental effects seen in unacceptable social behaviour such as aggression, hyperactivity, bullying, lying or stealing. Although EBD can be classified into either internalised or externalised in most studies in this field, a number of young people do show co-difficulties. This was previously supported in a study looking into 4,939 adolescents and 1,958 adults who received treatment.and it reported that 42.9% adolescents aged between 15-17 years are said to have co-occurring difficulties.

Several perspectives in explaining EBD underscore the great complexity of variables that may act as determinants and influence the onset of behavioural difficulties. Depending on who the orientation of the professionals and agents who identify and serve the child who needs help, the evaluation is affected by professional opinion, and also by does the training of the professional and his or her years of experience. The aetiology of EBD is diverse and multiple due to the wide-ranging behaviours, which can be classified under its umbrella. For instance, young people may have been predisposed to factors that cause the development of difficulties Sometimes precipitating factors could then trigger the onset of difficulties, and over the time and across context other perpetuating factors could maintain the difficulties. At a personal level, feelings of low self-esteem and difficulties faced during developmental pathways with combination of other impact from or on family structures would strengthen the link of EBD. For these reasons, adolescence is the period when emotional and behavioural are most likely to occur (Cooper, 1999c).

Therefore, the term of choice in the present study is emotional and/or behavioural difficulties (EBD). The choice of difficulties was determined on the basis of the current change in this field from disorder or problems to difficulties. A main consequence of moving away from models of illness was that intervention by teachers could potentially take place within the classroom (for a fuller explanation on this see Maras & Masser, 1996). Within the educational literature, the term difficulties are commonly used to refer to such deviant behaviour in current literature particularly in Britain (Cooper, Smith & Upton, 1994; Provis, 1992). The term difficulties seems to

be less likely to reflect the view of distortion or abnormality and the possibility of understanding difficulties involving the concept of continuity. This impression is consistent with the view that abnormality could be found to some extent, in almost all children. However some children need special treatment and help because their abnormality or deviance is severe and frequently shown to be detrimental to their own development and/or others. Although EBD has been defined differently with different terminologies, a behaviour that is not socially or culturally acceptable, and which is also detrimental to the child's own development and/or others' lives, can basically be defined as EBD. But what is important is that EBD is characterised by their intensity and persistence over time, it is important to distinguish such behaviour from what might be termed routine and mild misbehaviour.

1.2.2 Prevalence rates

Over the last decade, a significant development has taken place that has gradually provided information on the distribution of EBD in the general population via the use of epidemiological studies. The findings of these epidemiological studies seemed to indicate that EBD is quite common in school age children and many normal children could show minor degrees of the same difficulties; but children would be identified as having EBD when difficulties appeared serious, causing the interference with their own development as well as those of other lives. Table 1 provides a summary of the selected literature on some of the prevalence rates explored in this section (see page 21). In the Western cultures, epidemiological studies reported that at least one in every five children and adolescents display EBDs in different settings (Brauner & Stephens 2006; Costello, Egger, & Angold 2005). Equally important is the growing recognition of child and adolescents EBDs in developing countries (Elhamid, Howe & Reading, 2009). However, as context influences these problems, it is not surprising that we may get variation in the EBD incidence rates, depending on whether the report comes from parents, teachers or adolescents. Such disparities in reports are expected because adolescents may behave differently in different contexts such as home and school, a phenomenon commonly referred as situational specificity. In other words, the exhibiting of EBD in part relies on the situation or environment the child is in (Rutter et al., 1970). Another important finding was that few children were identified as having EBD by both their parents and teachers (Matsuura et al., 1993). That is, most of the children who were identified as having EBD by their parents were

not identified the same way by the teachers, or vice versa. This interpretation of EBD is based on the ecological view, where the developments of EBD experienced by a young person involve social interactions within various contexts, rather than characterising the problems within the child. For instance, this view was evidenced in a study where there was conflict of opinion between different parties i.e. school and home (Romi & Freund, 1999). While teachers seem to agree among themselves about the severity of most of the disruptive problems at schools, students and parents on the other hand were found to disagree among themselves on the severity of those disruptive behaviour problems. According to this perspective, it is necessary to obtain reports of the child's behaviour in different settings from different sources. This perspective is also supported by Farrell (995) who believes that disruptive behaviour can occur "because of the interactions between the child's family and the school and their individual or collective views of normality" (p.7).

A previous review of reported EBD among young people revealed that many studies had not included responses from parents, teachers and adolescents concurrently (Robert et al., 1998), in other words, few reports were drawn from all three respondent sources. This factor limits any discussion on the differences in perception of EBD between parents, teachers and adolescents, and more importantly the ability to identify evidence of the situational specificity of EBD. This problem was partly evident in a review of several studies in the reporting EBD prevalence rates by Robert et al. (1998). Their review of more than 20 different countries from Africa, Asia, Europe and America which looked at 52 epidemiological reports found that overall prevalence rates provided a vast range between 1% to 51% with a mean prevalence rate of 10.2% for preschool children and slightly more for adolescents at 16.5%. Of these studies only 10 available reports were from parents, teachers and child/adolescent. Most reports (16 studies) came from parent and child/adolescents and only 12 studies came from parents' reports alone. The sizeable gap in the prevalence rate was mainly as a result of using the Rutter questionnaire computed on 17 studies and 15 other studies were based on the application of DSM-III and DSM-III-R, which was frequently used during the period 1963 to 1996. The author of the 1998 review argued that most of the studies did not draw on a representative sample because at that time only a portion of the studies had used probability sampling. Most studies had focused on either a narrow age range (middle school, high school) or a

specific age target (age 3, age 8, age 11 etc.). Moreover, the wide gap in prevalence rate for reporting EBD could possibly be due to studies which used the standardised cut off points of the original measure or tool which might not necessarily reflect similar characteristics in defining EBD as difficulties.

In a later study by Meltzer, Gatward, Goodman and Ford (2000), they reported on the prevalence rate of young people in the UK aged 5 to 15 years old. The resaercher used the Strength and Difficulties Questionnaire (SDQ; which was evaluated against the benchmark set by the Rutter parent and teacher questionnaires in Goodman's study (Goodman, 1999) involving 10,298 parents' responses, 8,208 teachers' responses and 4,224 adolescent self-responses. It was reported that the Total Difficulty Score (TDS) of parents' SDQ score (9.8%) was slightly higher than the teachers' SDQ score (9.6%) and adolescents' SDQ score (5.2%). The exception was prosocial problems; here the teachers score was much higher at 13.1%. Using similar cut-off points as the UK SDQ version, a study in Australia (Fletcher, Tannoci & Bishop, 2001) found that teachers' ratings of much younger children (mean age of 7 years) were similar to those in the UK across several difficulties scales. In contrast, teachers in Australia rated much higher for children with hyperactive problems (21%) and overall TDS (13%). However the slightly higher rates of reported difficulties in the Australian samples were possibly because students were recruited much younger in their study based only on teachers' reports. However, in the UK, the samples covered a much wider age range across the three different respondent resources. It should be noted that, gender effects between these two different studies in different countries found consistent report for males with more conduct problems and hyperactive-inattentive problems. Boys were also less prosocial than girls, and the overall TDSs were significantly higher for boys.

Outside the Western samples, using the established UK cut-off scores produces prevalence rates that were too high and may not be a valid comparison with the original study. For instance, existing norm of cut-off points of the SDQ were used in a study involving 5-11 years of 675 adolescent reported by parents and teachers in Karachi, Pakistan. Using the existing cut-off points, parents produced 34.4% and teachers produced 35.8% in their report of prevalence rate of EBD (Syed et al., 2009). Parents rated significantly higher for males in conduct and hyperactive problems.

With teachers, significant association with male gender was only seen for hyperactive and prosocial subscales. All other associations were reported to be statistically insignificant.

Following this original study, Goodman (1997) argued the importance of making adjustment to the recommended banding of the SDQ scores defining as normal, borderline and abnormal for those recognised with EBD; band which reflect closely the characteristic of the sample of study. As a result, several studies have provided support where the established cut-off scores produce prevalence rate within the expected norm (10% in the borderline range and 80% of the population is within the normal category following suggestion by Goodman, 1997). For instance, in Germany parents reported prevalence rates of 10% for young people aged 6-16 years old via the Total Difficulties Score (TDS) of the SDQ (Woerner, Becker & Rothenberger, 2004). Across the TDS the difficulties were reported slightly lower than the British study (Meltzer et al., 2002). In another comparison study between France, UK and the US, involving samples of young people age 4-11 years old using individual cut-off points, parents reported prevalence rates that were comparable across the three countries with French samples slightly lower in their reports. Hyperactive-inattentive problems continued to remain high in the UK whereas prosocial problems were slightly higher in the US. Overall, the prevalence rates of parents' reports were comparable (Shojaei, Wazana, Pitrou & Kovess, 2009).

Comparing the above findings to some studies with responses from the Eastern region, very few researchers included the three sources of parents, teachers and adolescents in a single study. With the adjustment made to the cut-off scores of SDQ in some Asian countries, there appear to be some variations in the reported prevalence rates in comparison to Western reported rates. For instance, in China (Du et al., 2008), a study involving 3-17 year olds were reported to have higher Total Difficulties Score (TDS) across all respondents (parents 12.1%, teachers 9.8% and adolescents 10%) compared to the original UK based study by Goodman (1997) with responses from British population. Adolescents in China reported more internalising problems (China 7.1%; UK 5.1%), whereas in the UK, adolescents reported more externalising problems (China 7.4%; UK 10.6%). The age and gender effect in China did not differ much from reports in the west. Across all Chinese respondents, boys continued to

receive high scores for TDS, hyperactive-inattentive problems, peer problems and prosocial problems Parents rated the younger group as having more emotional problems and peer problems than the older group; but this was also seen to become less of a problem as the age of the adolescents increased. In contrast, teachers' ratings indicated they perceived more peer problems among older adolescents than in the young children. However, teachers' ratings of hyperactive-inattentive problems and prosocial development were reported to have decreased significantly as the adolescents got older. Another representative study was carried out in Japan (Moriwaki & Kamio, 2014) based on parents' and teachers' reports of SDQ among 7-15 year old Japanese children. The cut off scores were stratified according to age and gender-specific banding because the results revealed sufficient deviations to provide such bandings. The prevalence rate for TDS were greater for boys than girls from the reports for both parents' and teachers' reports. However, parents reported that older female adolescents (age 13-15 years) had higher TDS than boys with the same age. Across all difficulties' scales, both parents and teachers significantly rated males higher for all subscales, except for emotional problems which were consistently rated higher for girls. These findings are consistent with most responses in other studies. Regarding the age effect, it was expected that younger children would have a higher SDQ score than older adolescents. In another study involving a Thai sample of 5-16 year olds (Woerner, Nuanmanee, Becker, Wongpiromsam & Mongkol, 2011), the reported prevalence rates were obtained from responses of parents, teachers and adolescents. Parents, teachers and adolescents reported higher emotional and TDS scores in comparison to the UK sample. Parents' ratings were surprisingly high for externalising related problems (i.e. conduct and hyperactivity). The gender effect was only apparent in the parents' reports and was in line with other western behavioural expectation across gender. Although the significant report did not evaluate the age effect according to age banding, the overall impression of the age effect indicated that all problem scores were seen to decline with age, except for data based on the teacher-rated emotional scale.

Table 1 Summary of selected studies on prevalence rates of EBD across different cultures.

Study	Country	Age of samples	Prevalence rate/range
Brauner et al., 2006	US	0-5 years old	5-26%
Costello et al., 2005	US (10-year research update)	4-17 years old	12%
Elhamid et al., 2009	Egypt	6-12 years old	20-34%
Robert et al., 1998	Africa, Asia, Europe and US	Preschool and adolescents	Mean of 15.8
Meltzer et al., (2000)	UK	5-15 years old	5.2-9.8%
Fletcher et al., (2001)	Australia	Mean age 7	13%
Syed et al., (2009)	Pakistan	5-11 years old	34.4-35%
Woerner et al., (2004)	Germany	6-16 years old	10%
Meltzer et al., (2002)	UK	4-11 years old	10%
Shojaei et al., (2009)	France	5-16 years old	8%
Du et al., (2006)	China	3-17 years old	9.8-12%
Moriwaki et al., (2014)	Japan	7-15 years old	9.0-9.7%
Woerner et al., (2011)	Thailand	5-16 years old	8.6-9.8%

While several studies have now made adjustments to the cut-off scores and the reported prevalence rates are seen to be more comparable across different cultures, this modification has also affected the cut-off range for some categories describing normal, borderline and abnormal range that tend to vary for some countries. This change is more prominent in most Eastern studies, indicating that some form of behaviours may be reported either more or less than in other cultures. This bias may be causing some cut-off points to be higher or lower by one or more points than the study originally reported for the UK samples. The differences in their cut-off points possibly indicate differences in the level of acceptance for some kinds of behaviour, which might be more tolerated in some cultures than others. However, in most

studies, higher scores on the difficulty scale would also cause the cut-off point to be higher than the original range provided by Goodman (1997). In this case, it is important to ensure that when reporting, the range of cut-off scores, the population of the study would also need to describe problems of the existing subscale reflecting closely to what it claims to measure. This notion would mean some evidence of good factor structure, internal consistency and some support for validity test are necessary in studies reporting prevalence rates of EBD across different cultures.

Studies have highlighted that prevalence rates of EBD vary according to countries, geographical areas and also in different samples within the same country (e.g. urban/rural). Additionally, the prevalence rates are also said to vary due to various techniques used for identifying young people with EBD, and from the influence of the settings in which the behaviour is said to occur. Despite the methodological approaches that vary from one study to another, a significant proportion of young people did show Emotional and Behavioural Difficulties (EBD) during their adolescent phase of development. However, studies in which young people were identified as experiencing EBD, according to the three groups of informants (i.e. parents, teachers and adolescents) are relatively few. In terms of the gender effect, boys were consistently rated higher on most difficulty scales than girls. This higher rating for boys' difficult behaviour, when compared to girls may be attributed in part to the fact that most common types of difficulties for girls are emotional problems during adolescence; it is the behavioural problems that are more common among boys. With age, the number of adolescents who experience EBD are said to decrease with time. In the examination of the prevalence rates of EBD, the cut-off scores and the way the questionnaires represent the problem, were contributing factors that have been included in previous studies. Consequently these statistical factors relating to EBD were examined in the present study. The next section (1.3) would look closely at the psychological construct contained within the SDQ and YSR measures, which will provide a description of the theoretical principles underlying the development of these measurement tools.

1.3 Psychological constructs of the Strength and Difficulties Questionnaire (SDQ)

A structured questionnaire, which is the main data gathering of this study, is deemed practical since it is widely employed in most descriptive epidemiological studies in specifying the rates and distribution of EBD throughout the general population (Muris, Meester & van den Berg, 2003). Universally, although there are reports of high reported prevalence rates of EBD in the general population, only a small percentage of young people come into contact with mental health services (Leaf et al., 1996). Therefore, using a behaviour checklist like the SDQ can be an effective way to identify individuals who are experiencing difficulties and potentially could be in need of help from mental health services. Unlike overt behaviour problems which might be easily recognised by external raters of the questionnaires, many symptoms of depression, anxiety and other internalised problems are difficult for external raters to detect. For that reason, a carefully designed self-report instrument provides a structured and norm-referenced way to evaluate these difficult issues. In this current study, external raters used the Malay version of SDQ, but since the Malay version of the self-report of the SDQ was not available at the time of study, adolescents used the Malay version of the YSR. In support for the use of YSR, it was found that all version of SDQ addressing parents, teachers and elf-report sources, demonstrated high correlation with the corresponding version of Achenbach questionnaires (CBCL, TRF and YSR respectively) that tapped similar domains of psychopathological symptoms (Muris et al., 2003; Goodman & Scott, 1999).

Currently in Brunei, there is a need to evaluate the psychometric properties of the SDQ and YSR if they are going to be used on a continuing basis in Brunei. Without formal statistical evidence on the use of such measures, they lack the support for describing the exact nature of the Emotional and Behavioural Difficulties (EBD) when used in Brunei. The aim of the following section is to review the SDQ and the YSR measures specifically addressing the formation and description of the existing factor structure designed with and for the Western samples, as well as and how these measures are used in different cultural contexts.

1.3.1 Construct and function of SDQ

Goodman, the pioneer of the SDQ from its establishment in 1997 and the by providing sound psychometric evidence to support the SDQ as an assessment tool; an initiave which will be reviewed in detail in chapter 3. He demonstrated the value of the SDQ in a nationwide epidemiological sample of 10,438 British 5-15 year olds (Goodman, 2001). The SDQ that was derived from the Rutter scales was previously evaluated against the benchmark set by the Rutter parents and teacher questionnaire in the 1999 Goodman study.. Informed progress in the development of assessment tools for EBD has highlighted that the Rutter questionnaire offers insufficient coverage of such areas as concentration, peer relations and social competence (Goodman, 1994). Additionally, the parent-teacher correlation for the two sets of measures was comparable or favoured the SDQ (Goodman, 1997).

The SDQ is a brief behavioural assessment questionnaire for use with 3-16 year olds. The questionnaire exists in several versions to meet the needs of researchers, clinicians and educationalist. The SDQ is also widely accepted internationally, with over 60 translations for use across different cultures. The studies to date have shown acceptable levels of both reliability and validity demonstrating the strength of its theoretical principle as an assessment tool for Emotional and Behavioural Difficulties (EBD) but this is mainly based on Western studies. All versions of the SDQ investigate 25 attributes, some positive and other negative. These 25 attributes (items) are divided into 5 scales: i) *Emotional symptoms, ii) Behavioural problems, iii) Hyperactive-inattentive problems, iv) Peer relationship problems and v) Prosocial behaviour*) and can be scored on a three-point scale: i) *Not True, ii) Somewhat True an iii) Certainly True*.

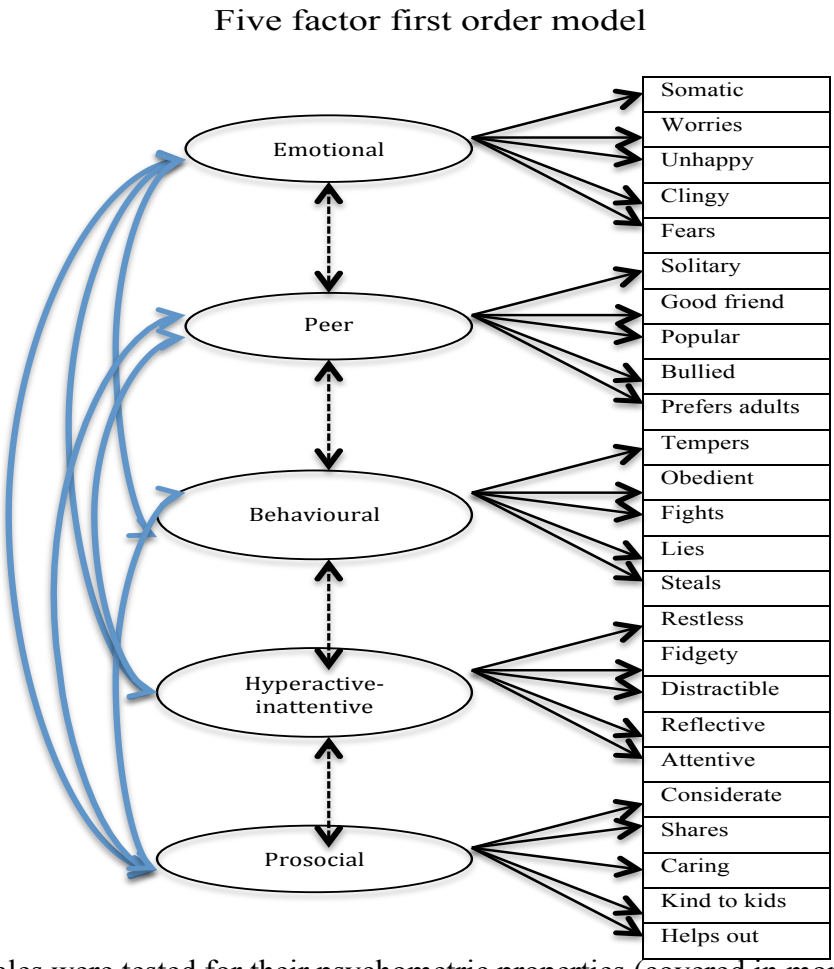
The SDQ is available without cost online and can be scored by hand. The total scores of all scales for the 20 items, provide a Total Difficulties Score (TDS), indicating the severity and the type of psychological problems the respondent may be experiencing. The remaining five items generates the prosocial scale, which indicates the nature of the prosocial characteristics a child shows. Hence, the SDQ assessment tool does not focus only on difficulties. It includes some positive characteristics not only to increase the likelihood of acceptability among respondents to participate but also recognising some positive strengths could sometimes be helpful in supporting an individual if they

are struggling with other aspects of their lives (Magyar-Moe, 2013). Additionally, advantages include the existence of the same version for parents, teachers and adolescents (although the adolescent version is not available in Malay), thus allowing for different views from more than one perspectives and therefore enabling the triangulation of data. In the original study by Goodman (1997), based on the UK samples the exact placement of the cut-off scores was distributed into three categories of abnormal, borderline and normal scores). These cut-off scores using the term abnormal/clinical as proposed by Goodman, were considered less appropriate outside the clinical setting (Mellor, 2005, 2007). Instead, Mellor suggested relabelling or including additional labelling of "query" at the borderline level, and "of concern" at the abnormal level, given the SDQ is primarily used as descriptive tool in specifying the rates and distribution of problems in larger populations rather being employed as a diagnostic instrument. Further, it was noted that the aim of SDQ vary slightly between clinical and community populations (Stone, Otten, Engels, Vermulst & Janssens, 2010). In a community of young people, the presence of some but not all psychological problems is assumed; hence the SDQ should be sensitive in detecting those young people in the community who have or might develop, some of those psychological issues.

1.3.2 Theoretical development of SDQ

In this section, the theoretical structure of the parent and the teacher versions of the SDQ will be reviewed in order to understand how items are categorised and to analyse how other studies respond to the existing theoretical structure of SDQ. The SDQ measure comprised of a five-factor solution, which resulted in five scales: i) *Emotional, symptoms, ii) Behavioural problems,iii) Hyperactive-inattentive problems, iv) Peer relationship problems and v) behaviour* (Figure 1.1)

Figure 1.1 Five-factor first order model (Goodman, 1997).



These five scales were tested for their psychometric properties (covered in more detail in Chapter 3) across various cultures. While some studies, mainly from the European region, repeated the factor structure of those five scales mainly from the European region, some studies with samples from the United States, Australia and some part of Eastern society reported only poor theoretical support for the scales. When these previous studies were reviewed, few reports available provided evidence of factor structure involving samples of adolescents aged 12 years and above (Stone et. Al.., 2010).

The parent version of the SDQ revealed a good factor structure that resulted in the five subscales of i) Emotional symptoms, ii) Behavioural problems, iii) Hyperactivity, iv) Peer relationship problems and v) Prosocial behaviours in studies involving community samples from the Netherlands (Muris et al., 2003) and Germany (Woerner et al., 2004). In addition, further studies across 10 European countries of Austria, Denmark, France, Germany, Iceland, Italy, Netherlands, Norway, Switzerland and

UK (Becker et al., 2006), together with another study from Germany (Rothenberger et al., 2008) reported similar results. Countries like Australia (Mellor & Stokes, 2007) and in the US (Dickey & Blumberg, 2004) reported weak support for the theoretical five-factor structure. For instance, Dickey and Blumberg (2004) found that a stable three-factor structure model consisting of externalising problems, internalising problems and positive factors, which provided the best fit for the SDQ subscale. To some degree, Goodman supported such a notion; however he concluded that there are advantages of using the suggested broader internalising and externalising SDQ subscales for analysis in low-risk samples, while retaining all five subscales when assessing for greater psychological difficulties.

Unlike the parents' SDQ version, the teachers' SDQ version has not been tested to the same extent. The currently available teacher SDQ factor structure involving community samples has only been reviewed in studies involving those with wider adolescents age group. from Australia (Mellor & Stokes, 2007), China (Du et al., 2008) and Italy (Tobia et al., 2013) In these studies, there appeared to be a poor fit for the five-factor structure of SDQ. Chinese and Italian teachers both reported some items that loaded highly onto other factors instead of loading onto the predicted scale. Australia also reported poor fit for the uni-dimensionality of the theoretical five-factor structure. Despite its rigorous standards when they were analysed at item level, it only tested the strength of the loaded items onto the predicted five-factor structure. Hence it was not possible to observe if any items actually converge or diverge onto factor structures, based on the reported SDQ. Beside these studies, there exist few studies that reviewed the teacher SDQ in other community samples. Scarce examples include i) a study from Kinshasa, Africa with children aged 7-9 years old (Kashala, Elgen, Sommerfelt & Tylleskar, 2005) and research with young Flanders children aged 4-8 years old (Van Leeuwen, Meerschaert, Bosmans, De Medts & Braet, 2006) and in Danish children but with constricted age groups between 5- 7- and 10 to 12 (Niclasen et al., 2012).

Within the South East Asian region, the SDQ theoretical factor structure has only been examined in Thailand (Woerner, 2011) and Malaysia (Mellor, 2007). The Thai samples only tested the internal factor structure of the parent SDQ and it yielded poor fit to model for the five-factor structure. Instead, the fifth factor extracted from the

parent-rated SDQ items could be best interpreted as reflecting a culture-specific positive dimension (instead of the predicted peer factor) and was tentatively labelled "mature self control". In the Malaysian samples, the best fit appeared to be stable across the three-factor structure instead of the existing five-factor structure: the three factors were marked as internalisng, externalisng and prosocial behaviours. However, the Malay version of the SDQ used in that 2007 study did not use the same version as that one available on the SDQ website, as is employed in this study.. It was found that the study adapted the SDQ and translated back to back from other individuals. In that sense, with the current original Malay translation of SDQ and as far as the researcher is concerned, no study has provided statistical evidence on the usefulness of SDQ when used with a Malay population, specifically a Bruneian samples.

1.3.3 The Malay version of SDQ

The SDQ Malay version is available on the website and was originally translated by a Malaysian clinical psychiatrist who used to work in Malaysia but is now working in Brunei. Currently, the SDQ Malay version is used to get a first overall impression of a client's problems before a formal clinical meeting. Although Malay language is understood in both Brunei and Malaysia, both Malay language and Malaysian language do not exactly correspond to one another for all references. When this Malay version of SDQ is employed in Brunei, it is possible items of the SDQ may influence how emotional and behavioural difficulties are conceptualised. Hence it is crucial to examine if any patterns of association on the items could be influenced by how those items are understood. Although similar versions are available for parents, teachers and adolescents self-report, the Malay version has only been translated for parents and teachers. It was not possible to translate the self-report (the adolescent version) at the time of study. Therefore, this study will also explore the usefulness of the Malay version of the YSR when used in Brunei context to report for adolescents' psychological wellbeing.

1.4 Psychological construct of the Youth Self Report (YSR)

1.4.1 Construct and function of YSR

The Achenbach System of Empirically Based Assessment (ASEBA) for school-age children includes three instruments for assessing emotional and/or behavioural problems: i) Child Behaviour Checklist (CBCL) to be completed by parents, ii)

Teacher's Report Form (TRF) to be completed by teachers and iii) the Youth Self Report (YSR) which is used in this study and is completed by the adolescent respondents. The ASEBA offers a comprehensive approach to assessing adaptive and maladaptive functioning in children and adolescents. It is widely used in mental health services, schools, medical settings, child and family services, public agencies, child guidance, training and research. The ASEBA instruments have been translated into over 80 languages and there now exist more than 7,000 publications on the use of ASEBA materials involving the work of 9,000 authors from over 80 cultural groups and societies (www.aseba.org).

The three questionnaires have a similar structure comprising two sections: one for social competence/adaptive functioning and another for behaviour problems (i.e. behaviour profile). The behaviour profile which is the focus of this study, is comprised of 118 items that can be scored as follows: a) zero (not true), b) one (somewhat or sometimes true) or c) two (very true or often true). These items provide scores for eight narrow-band scales or syndromes i) *Anxious/Depressed, ii) Withdrawn/Depressed. iii) Somatic Complaints, iv) Social problems, v) Thought Problems, vi)_Attention Problems, vii) Rule-Breaking Behaviour,* and viii) *Aggressive Behaviour*), and three broad-band scales: a) Internalising Behaviour Problems, b) Externalising Behaviour problems and c) Total Behaviour Problems are also part of the ASEBA materials. The name given to these subscales syndromes is empirically derived syndromes identified by factor analysis. Items from the syndromes or subscales *Anxious/Depressed, Withdrawn/Depressed* and *Somatic Complaints* are components of the internalising scale, while items from syndromes or subscales *Rule-Breaking Behaviour* and *Aggressive Behaviour* are components of externalising scale. The remaining 3 syndromes or subscales of Thought, Attention and Social problems are seen as distinct narrow concepts. The Total Problem scale includes items from *all* syndromes. The eight-factor structure of the YSR was derived from the analysis of clinical samples by Achenbach and Edelbrock (1989) and subsequently refined through the analysis of new samples (Achenbach, 1991; Achenbach & Rescorla, 2001). The sample used to derive the syndromes from 2001 included children recruited through the U.S National Survey of Children, Youth and Adult,s plus clinically referred youth from Australia, England, and the United States (Achenbach & Rescorla, 2001).

The current edition of the YSR is developed for clients aged between 11-18 years, as were the previous editions (Achenbach, 1991d; Achenbach & Edelbrock, 1987). There appeared to be differences in some of the items of the behaviour profile sections among the three versions for parents, teachers and adolescents. However, such reported differences reflect contextual differences, where parents are asked a few behaviours that are specific to the home or environment; for example, is the child disobedient at home, sleeping less. Teachers are asked to evaluate a few behaviours specific to the school environment (e.g. disturbs other pupils, breaks school rules).

Focusing on the Youth Self Report (YSR), there exist several issues with the theoretical eight-factor structures of YSR which may compromise its usefulness. The first issue is the length, with 112 items, it is long and cumbersome to administer. The second issue is that a number of items load on more than one factor (Achenbach, 1991). Third, not all of the syndromes' scores load on one of the two-second order factors i.e. Internalising and Externalising. More specifically, the thought problems, attention problems and social problems syndromes are excluded even though they conceptually relate to the domains of Internalising and Externalising. Additionally, as many researchers and clinicians use only the Total Problems, Internalising and Externalising scales, much valuable information is potentially lost.

1.4.2 Theoretical development of YSR

In this section, the theoretical structure of the adolescent version of the YSR will be reviewed in order a) understand how items are categorised and b) to analyse how other studies respond to the existing structure of the YSR. The YSR measure is comprised of an eight-factor solution, which resulted in the eight scales: Anxious/Depressed, Withdrawn/Depressed. Somatic Complaints. Social Problems, Thought Problems, Attention Problems, Rule-Breaking Behaviour, and Aggressive Behaviour.

These eight scales were tested for their psychometric properties (Chapter 3 will go into more detail) across various cultures. However, there are few studies which have explored the pattern of the eight-factor structure of the YSR. A wide community study consisting of 23 different societies (Achenbach et al, 2002) reported that there

were only significant loadings on the predicted factor instead of examining the loadings of the overall factor structure. It was reported that only 19 societies had significant loadings on their respective factors; non-significant loading was presented in samples from Ethiopia, Norway, Puerto Rico and Sweden. Generally, the reported study did not address the pattern of factor analysis of the YSR and it was not known if any items freely diverged onto other factors with higher loadings than the predicted factor. It can be argued that the 2002 study will need further verification (such as convergent validity) of the concept defining the narrow eight-factor syndromes, because cross-cultural studies involving large societies may reflect differences in the way they comprehend problems. This issue was evident in some of the items with non-significant loadings in at least sixteen items from Sweden, four items from Puerto Rico, two items from Norway and one item from Ethiopia. Like other studies which look closely into the factor structure, a study in Japan reported a better fit for a 6-factor structure. However, a study by O'Keefe and his colleagues (2006) using a representative U.S. sample, found a shorter two-factor theoretical structure and recommended this shorter version of the YSR. However, this proposed two-factor structure was found to be different from the original second-order factor, which was already established for the YSR. O'Keefe and his colleagues reported multiple items that were labelled as indicators of mixed first-order factors, given they loaded on both internalising and externalising second-order factors. In other words, there was a tendency for items from other proposed syndromes such as Thought, Attention and Social problems) to load on either internalising and/or externalising problems. This somewhat confusing situation indicated mixed syndromes' properties that had already been established for the YSR in other earlier studies involving clinical samples (Achenbach, 1991; Song, Sing & Singer, 1994). However, Achenbach (1991), previously argued that loadings of these three subscales on eight symptoms was not significantly high enough and was not consistent for each sex or age group. Hence, these three subscales have a distinct narrow concept measuring thought problems, social problems and attention problems that best support the second-order factor originally proposed by Achenbach. Despite limited psychometric evidence supporting the use of the YSR within the Asian region, it was previously argued that YSR (including other Achenbach Questionnaires) is the most popular questionnaire on child and adolescent psychopathology published since the 1970s (Leung & Wong,

2003). Therefore, a continued effort in exploring the Malay translation of YSR is considered crucial.

1.4.3 The Malay version of YSR

The Youth Self Report (YSR) was translated by professionals from Malaysia and similar to the SDQ measure, professionals in Brunei also sought to understand the psychological difficulties of adolescents referred to them by using the existing YSR. To date there has been no published data available from Malaysia which demonstrate support for the eight-factor structure. This means that the continued used of this Malay YSR in Brunei may lead to false representation of how emotional and psychological difficulties are conceptualised within Bruneian culture. Therefore there is a need to explore the pattern of conceptualisation when the YSR is used with samples from Brunei, bearing in mind it has a total of 118 items to validate.

In this section, both the functions of the SDQ and YSR have been described. Some findings are provided on the theoretical factor structure that looked closely into community samples from different translations. Following this initial exploration of factor structure from previous studies, and to ensure the refinement of this theoretical approach, central concepts of reliability and validity will also be employed. Such use will in turn, provide this current study with the ability to judge the criteria for evaluating the usefulness of the Malay translation of SDQ and YSR when used in Brunei context. This issue will be covered in more greater detail in Chapter 3.

1.5 Summary of Chapter 1

Chapter One introduced two key elements of the theoretical background related to the thesis. Firstly, it considered the psychological measure of Emotional and Behavioural Difficulties (EBD) focusing on terminology and definition of EBD across different perspectives, as well as providing reviews on the prevalence rates of EBD. Secondly, the psychological constructs of SDQ and YSR were examined; in particular the function of these two tools in assessing EBD, evidence of theoretical development of those tools when used in other studies and finally the issues related to the Malay version of SDQ and YSR were carefully looked at.

The report of psychological measure using SDQ and YSR is limited in a number of ways. Firstly, the empirical research on providing statistical evidence on the usefulness of the assessment tool has greatly focused on samples from the Western general populations. Although there exist different perspectives in which professionals seek differences in explaining the causes of externalising and internalising problems, another crucial element in understanding how EBD is conceptualised is through the lens of different cultures. Secondly, adolescents in particular may all go through similar transitional stage that are comparable universally. However, the experience of going through the adolescence transitional stage may differ when placed in a non-western culture. Thirdly, some studies have focused on single informants in reporting the issues related to EBD among adolescents. However, studies have shown that using multiple informants is more valuable in capturing the problems experienced by adolescents, nevertheless doing so may cause disparity in perception, since EBD relies in part of the situation and/or environment the child is in and this is commonly referred as situational (Achenbach, McConaughy & Howell, 1987). Finally, most studies that focus on reporting EBD through responses from parents, teachers and adolescents employ assessment tools that have not been standardised on non-Western populations. In chapter 2 a more detailed review will begin to unveil how culture impacts on the development of acceptable norms and what is seen as problematic behaviour might vary across different cultures.

CHAPTER 2
ADOLESCENTS' PSYCHOLOGICAL DEVELOPMENT AND DIFFICULTIES ACROSS DIFFERENT CULTURES

2.1 Introduction

The previous chapter addressed the general understanding of the term Emotional and Behavioural Difficulties (EBD) from different perspectives. Issues addressed were its prevalence rates, the psychological construct for assessing EBD, the functional construct of the Strength and Difficulties Questionnaire (SDQ) and the Youth Self Report (YSR). The purpose of this chapter is to provide a more detailed overview of the research, which explores the impact that culture has on the development of culturally acceptable norms for adolescent behaviour. Recognising the role of cultural norms is crucial in informing the type of behaviour that may be perceived as problematic in one culture, whilst the same behaviour might be seen as normal adolescent behaviour in another culture. The research that forms this thesis compares the influence of Western and Eastern cultures on the development of acceptable norms: Western society is thought to promote more individualistic beliefs, whereas Eastern society is thought to reflect a more collectivist culture

The purpose of this chapter is to review studies that have focused on how emotional and behavioural difficulties are described similarly or differently across cultures, thus setting the cultural context of the studies outlined in this thesis. The following section will begin by introducing how culture informs acceptable norms of behaviour across different cultures. Initially, it will look at the role of culture in the development of acceptable norm within the Western societies, and will then consider the development of cultural norms in Eastern societies. This section will also link some of the cultural norms that could be considered as a way of life in Brunei. Finally, a review on how Western and Eastern cultures identify problematic emotional and behavioural development is addressed.

2.2 The impact of culture on the development of acceptable behavioural norms: Western and Eastern perspectives

The term culture has been conceptualised in several different ways in past research. For instance, anthropologists have described cultures with respect to rituals, myths and symbols (Jahoda, 2007) and as cultural practices (Cole & Packer, 2011). On the

other hand, psychologists have used the concepts of cultural dimensions such as individualism and collectivism (Triandis, 1995), tight and loose cultures, (Gelfand et al., 2011) cultural tasks (Kitamaya & Imada, 2010) or cultural models of agency (e.g. independence, interdependence). How specific beliefs values and practices vary across nations was also described (Markus & Kitamaya, 1991). Generally, these different perspectives about culture shared common perspectives, where culture is thought to comprise the ways in which a collection of people process and make sense of their experiences. Culture influence and shapes a wide array of functions, which includes cognition as well as practices related to childbearing and children's development (Bornstein, Putnick & Lansford, 2012). This section will focus on the social orientation denoted by Triandis (1995), which uses the widely known terms "individualism" and "collectivism". The understanding and meaning of relationship are seen to be coloured by the values emphasised in the socialisation of its people. This work is concerned with ecological models of culture that can explain the distribution of this broad domain of individualist and collectivist and of related psychological characteristics on a universal scale (for review, e.g., see Berry et al., 1992).

Several models described the development of EBD, including ecological models (Bronfenbrenner, 1979), emotional and behavioural regulation models (Batum & Yagmurlu, 2007), and biopsychosocial models (Gottlieb 2003). The ecological models are particularly important in understanding the psychological development of children and adolescents (Lynch & Cicchetti, 1998), this is because any culture is said to have a specific ecological context that emerges from the interaction of basic human nature in which groups are formed and exist through a process of social interaction. According to ecological theory, an individual's behaviour needs to be seen in relation to the environmental conditions experienced by that person and to be understood contextually in terms of the purposes served by the behaviour. Hence, it is not unusual for a child to behave very differently when at home and in school, nor in one situation from another. Thus contextual influence highlights a view that has been supported by the fact that Emotional and Behavioural Difficulties (EBD) are likely to be associated with specific situations. A meta-analysis study by Achenbach, McConaughy, and Howell (1987) demonstrated that much of the behaviour observed by parents at home, and teachers in school, is contextually dependent and specific to the situation in which

it occurs. Culture is thought to influence socially transmitted behaviours, in the form of cultural practices as well as the specificity ways people adopt for understanding the world and themselves, in the form of cultural worldviews (Matsumoto, 2006b). In other words, an individual produces behavioural responses in their membership group in order to live culturally. Within these groups, there exist social roles that influence and inform expectations and normative behaviours that have emerged from the psychological meanings attributed to situational contexts. Importantly, parenting and culture are intimately linked because two intertwined major goals of parenting are to successfully 1) transmit cultural norms, 2) values and 3) expectations across generations. More specific values and expectations take the form of goals of socialisation (or parental ethnotheories) regarding what attributes and behaviour parents encourage and discourage in adolescents within a particular culture (Harkness & Super 2006). As another crucial socialising environment of children, the school influence has been considered. Here, teachers' views about acceptable norms and problematic behaviours would inform their understanding of Emotional and Behavioural Difficulties (EBD) which may vary as a result of culture and context.

2.1.1 Western cultural impact on acceptable norms

Western cultures are known to be highly individualistic, where societal norms encourages independence and prioritise a concern over personal needs rather than the needs of others (Markus & Kitayama, 1991; Pomerants & Wand, 2008). The fundamental goal in this cultural belief model is to foster healthy self-esteem, personal achievement, and creativity. Therefore, young people are encouraged to be self-reliant and independent from their family and peers. Triandis (1995) argued that as individualists, they easily form loose types of social relations with their surroundings and are therefore less likely to form emotional reliant relationship with those surroundings. Hence parents in such a culture would expect adolescents to begin to attach greater importance to symmetrical relationships (e.g. friend-friend). Therefore, the transfer of attitudes, norms and values that include independence, right to privacy, leading to self-confidence and competence are all expected of adolescents in the Western community. Parents would expect adolescents to be emotionally independent earlier than would parents in the East. It was also argued that Western parents' promotion of the development of self-governing functioning in adolescents leads to adolescents having better adjustment and higher level of psychosocial

functioning, thereby improving their emotional and behavioural development (Deci & Ryan, 2000). However, studies of American parents have shown that undermining and restricting of adolescent autonomy have been linked to a wide range of negative outcomes, including depression and greater display of externalising problems (Allen, Hauser, O'Connor & Bell, 2002a; Goldstein, Davis-Kean & Eccles, 2005). Arguably, such findings only represent the perspective from middle-class European and American values and therefore limit generalising of such findings to other cultural and socioeconomic setting.

Parents' use of reasoning in the West is arguably informed by the value placed on has individualism, where parents decline to impose direct authority on adolescents. Parents view that such reasoning and being expressive may be positive contributions to the development of adolescents' thinking abilities. It is argued that such promotion provides adolescents with the ability to think for themselves and develop an autonomous system of self-affirmed values and expectations (Hoffman, 1994) Furthermore, among European and American societies, parents encourage adolescents reasoning to develop a key dimension of social competence, a balance between continued connections with parents while simultaneously fostering the emergence of youthful autonomy (Collins & Steinberg, 2006)). Universally parents also exercise some form of monitoring or supervision of adolescents' social activities. For instance, US parents often monitor adolescents' dating activities, preventing anti-social behaviour and discouraging deviant peer relations, as well as prohibiting, or attempting to prohibit, the use of drugs among adolescents (Racz & McMahon, 2011). However, the difference with Western culture against Eastern culture is that, Western cultural monitoring of children's behaviour is often firm but with moderate control that avoids the exercise of intrusiveness. Such a control model depends to a great extent on the degree to which the young people are willing to share information with their parent or parents (Crouter & Head, 2002; Racz & McMahon, 2011).

2.2.2 Eastern cultural impact on acceptable norms

Within the Eastern cultures, development of autonomous identity among adolescents may not be a developmental goal, instead what is strongly emphasised is affiliation, cooperation and harmony in interpersonal relationships (Halgunseth, Ispa & Rudy, 2006; Kitamaya, Markus & Kurokawa, 2000). The most cited studies on collectivist

culture have been drawn from East Asian nations such as Japan, China, Korea and India. Consequently, little is known about cultural elements driving the concept of developmentally acceptable norms in South East Asian countries such as Brunei and Malaysia, two of the other Malay Kingdoms in the region. Therefore, this section will consider some findings from this region and how Eastern literature relates to adolescents' development of acceptable norms in Brunei.

In line with the collectivist beliefs, it was reported that accepting parents' decisions (Pomerantz & Wang, 2009) as their own provides opportunities to harmonise with parents, something that in East Asia is prioritised over autonomy. Similarly, studies of non-Western cultural groups, such as Chinese (Leung, Lau & Lam, 1998), and Algerian and Saudi Arabian (Dwairi & Achoui, 2010) groups have reported negative or insignificant relationships between autonomy and adaptive child outcomes. However, all of the related studies were carried out at a single point of time and cannot be viewed as providing insights into whether parental control of autonomy precedes dampened psychological functioning among children in both Western and East Asian contexts. A cross-cultural comparison study between the United States and China sheds some light on this issue (Qin, Pomerantz & Wang, 2009). However, despite the differences in cultural context, it was reported that the more parents make decisions for children about personal issues as they enter adolescence, the more the children suffer in terms of emotional functioning two years later. It should be noted there was no difference in the effect size between those two cultures.

Within the collectivist culture, parental reasoning is also in evidence but perhaps it is more often used as a parental teaching through which parents seek to influence adolescents while instructing them in a rational manner. This influencing initiative is done to ensure children conform and internalise their values and expectations as part of their character development (Peterson, Cobas, Bush, Supple & Wilson, 2005). Since interdependence and conformity are fostered within the Eastern culture (specifically part of the Malay way of life style), characteristics such as filial piety, adherence to conventions, obedience and unquestioned loyalty to the family and are strongly encouraged. Young people in Eastern cultures are commonly thought of as more socially introverted compared to young people in Western cultures, since adolescents are strongly encouraged to be less direct and open in social interactions,

therefore they are more cautious in expressing their feelings (McCrae, 2004). Studies done on personality traits of Malay youth support the values emphasised above (Khairul, Jun & Cooper 2000). Malay youths were found to score high on agreeableness and low on extraversion and openness compared to youths in the Western culture.

Parents in the East exercise a higher level of monitoring or supervision towards adolescents. At the root of collectivist culture, parental supervision is quite common during the period of adolescence. As a result parents normally delay granting adolescents their autonomy until later, when compared to adolescents in the West (Supple, Ghazarian, Peterson & Bush, 2009). The underlying motivation for tight supervision among Eastern parents is the concern for family obligation (saving face) and family honourwhen disciplining their children. For example, in the Philippines, boys are granted more freedom in expectations and behaviours compared to girls (Liwag et al., 1998). Girls' restriction peaks when they reach sexual maturity. Any social and romantic relationships with the opposite sex are constrained and social activities outside the home are restricted. This over-protection of girls are also commonly seen among parents in the Malay Kingdoms (such as Brunei, Malaysia and Indonesia) as well as the Muslim countries of the Middle East. It is required that young Muslim woman must ensure their behaviour, demeanour and overall appearance is modest. It is also common practice that adolescents from the Muslim countries (such as Brunei and Malaysia), are always reminded about that their religion defines what is considered undesirable conduct. For example, if a couple is discovered to be indulging in premarital sexual relation they will be fined and forced to wed. While premarital sex may be more accepted in other cultures, Brunei's national religion of Islam influences sexual mores and it is therefore considered that such concerns and restrictions over their daughters' wellbeing are necessary because family honour rests on a daughters' moral and demure behaviours. Moreover, these differing gender norms are widely seen across various levels of social life: whether in rural or urban, upper or lower SES or Muslim or Christian subcultures (Liwag et al. 1998).

The contrasts between individualist versus collectivist cultures do not completely capture the complex patterns of socialisation experienced by adolescents, and thus

have resulted in many studies presenting contradictory findings that have continued to confound the field of research (Peterson, Cobas, Bush, Supple & Wilson 2004, Smetana, 2002). However, it is important to recognise that since autonomy is a developmental goal, this is even seen in some cultures that have been characterised as more collectivist. Example of such cultures include Asian American, Asian and Latino immigrants compared to the general cultures mores of the United States and Australia (Feldman & Quatman, 1988, Fuligni, 1998). Recent research by Qian et al (2014, 2015) highlights that for Chinese adolescents, individual identity is an important aspect of development, but social identity and cultural belongingness are particularly important to adolescents residing in mainland China.

2.3 Parents' and teachers' views of problematic and socially unacceptable behaviours across cultures.

In cultural development, social age is a most interesting pattern seen universally across different cultures. Social age is defined by expectations of the socio-cultural group as to which role a person should play at a certain chronological age. Interestingly, the social meaning of age groups can change according to the "social construction" of age and development. In different cultures, similar life events might thus be defined as normative or non-normative, depending on the general expectations of society (see also Baltes, Reese, & Lipsitt, 1980). Cross-cultural researchers have conducted a number of studies of young people's behaviours in different societies (e.g., Chen, Chung, Lechcier-Kimel, & French, 2011; Whiting & Edwards, 1988). Despite the methodological problems, some interesting patterns of cross-cultural differences have emerged among Asian, Latino, European, and North American children and adolescents. Despite the differences in rate of manifestation of externalising and internalising behaviour problems across cultures, external behaviour problems are more common among boys, whereas the latter behaviour problems are more common among girls (Cicchetti & Rogosch, 2002). However, it is important to recognise that gender differences in the presentation of behaviour problem are also determined by what relates to the value systems in societies: such as the extent to which such behaviours result in increased parental control and social disapproval. Consequently, higher rates of externalising problems are commonly reported where externalising behaviour is not actively discouraged or disapproved of, as a result of

lower tolerance thresholds in some cultures. Similarly, higher rates of internalising behaviour are commonly reported where interdependence is encouraged or seen as normative within the society. Hence, reporting such incidence rates of externalising and internalising problems must be done with sensitivity to the culture such data represents.

2.3.1 Internalising problems among adolescents across cultures

One notable pattern that has emerged from epidemiological studies is that the rate of depression appears to be less prevalent in Asia (e.g. Japan, China, Taiwan) than in a Western country like Canada (Bland, 1997). Similarly, a study from the World Health Organisation (WHO) indicated that reported rates of depression for Japan were 1.5% and China was 2.4%. In contrast, the prevalence rates for Western countries were significantly higher with 17.1%in the United Kingdom and 6.4% in United States respectively (Simon, VonKorff et al., 1999). It was argued that differences have been attributed to cultural variations in the conception of emotional problems (such that Western cultures tend to view emotional problems as separate from physical complaints, rather more is evident in Eastern cultures). It was also suggested that Asian cultures are more likely than Western cultures to stigmatise emotional problems (Kramer, Kwong, Lee & Chung, 2002) ,Different levels of familial support is evident with Asian participants receiving more social support and family interdependence than those people with psychological problems in Western cultures. Emotional difficulties are viewed as socio-moral problems and it is considered more appropriate to discuss these problems with a family member, elder, or a trusted spiritual or community leader (Kirmayer, 2001). This perception was also supported in a previous study involving samples from Malaysia. It was found that adolescents' mental health status was significantly influenced by both religious well-being and spiritual well-being. (Yahaya, Momtaz & Othman, 2012). The tendency to somaticise emotional distress may be related to cultural conceptualisations of health. In traditional Chinese medicine, the emotional distress is believed to be a function of the imbalance of yin and yang which is thought to simultaneously affect psychological and physical functions of the body (Chen, Fu & Leng, 2014).

Another form of emotional problem that appears to vary across culture is that of anxiety problem. Based on a Revised Fear Survey Schedule, Nigerian children have

been reported to show higher levels of anxiety than Chinese children, whereas Australian and American children showed lower levels of anxiety than Chinese children (Ollendick, Yang, King, Dong, & Akande, 1996). In a different culture, Turkish children's anxiety was reinforced by parents suggesting that in order to achieve control and discipline over their children's behaviour, parents often utilised the threat of religious punishment (Erol & Sahin, 1995). In a study involving the two different countries of Japan and Germany, based on the research using the Spence Children's Anxiety Scale (SCAS; Spence, 1998), a study by Essau, Sakano, Ishikawa and Sasagawa (2004) found overall levels of anxiety symptoms were equivalent across both countries. This balance existed despite the Japanese child rearing practices that emphasised self-discipline, politeness, attentiveness to others and a strong sense of personal and group identity (Weisz, Rothbaum & Blackburn, 1994). However, a more recent finding in a study by Essau and colleagues (2011b) found that adolescents in England reported significantly higher levels of anxiety symptoms than did adolescents in Japan. This report is in line with other previous surveys, which found higher mental health problems among young people in England (Neltzer, Gatward, Goodman & Ford, 2000). However, it is also not unusual that other studies found higher reports of internal related problems to be more prevalent in societies that value inhibition, compliance with social expectations, and social evaluation; in other words in Asian countries (Ollendick et al., 1996). For instance, a comparison study between adolescents from Thailand and America using a parent self-report measure found that Thai children demonstrated more internalising behaviours than did the American children (Weisz, Suwanlert, Chaiyasit & Walter, 1987). In another comparison study, Korean-American youths showed significantly higher levels of distress than did Anglo-American adolescents (Choi, Stafford, Meininger, Roberts & Smith, 2002). According to Jansen et al (2004), any cross-cultural differences are likely to be associated with parental child-rearing practices. Parents in many Asian cultures often use verbal criticism, punishment, and threat to socialise their children; techniques which may well induce high level of anxiety and depression (e.g., Chao, 1994; Lin & Fu, 1990). This parenting style is also seen among some Malay parents. Since many Eastern societies value higher levels of behavioural inhibition it is possible that some of these internalising problems may not always be evident to adults such as parents and teachers, given that over time, children have developed tolerance, courtesy and politeness. To some extent, societies who adhere closely to this culture

mores would avoid offending others as a result of their sensitivity and are said to prefer indirectness when dealing with others, which also holds true among the Malay culture (Ali, 2010). How far this rings true for the modern Malay remains to be seen in this study. Consistent with traditional Thai values and among Asian societies, they view overcontrolled problems (such as shyness and fear) as less serious, less worrisome and more likely to improve with time (Weisz et al., 1988). Alternatively, 'shyness' and 'inhibition' in young people are regarded by parents and teachers in Western cultures as signs of incompetence and immaturity requiring protection, intervention and sometimes even reprimand. Hence traditional Eastern parents may not view some internalising behaviours on Western assessment scales such as 'being obedient without question' and 'lack of assertiveness' as clinical problems, but rather desirable behaviours in their child.

In Asian cultures, EBD may carry with it a serious social stigma indicating weak will and spirit (Chung & Wong, 2004). Moreover, the social stigma associated with mental problems is believed to damage the reputation of the family, whereas physical illness may well not bring humiliation and shame to the individual or the family (Chen & Swartzman, 2001). It has also been suggested that a collectivistic orientation requires individual's to suppress the expression of their negative emotions, which may in turn lead to somatic dysfunction of the individual's body system (e.g., Traue & Pennebaker, 1993). Overall, it is important to note that high anxiety levels of psychosocial functioning among adolescent in different cultures must be interpreted with caution. For instance, a study by Leung, Hung, Ho (2008) showed that 77% of the Chinese adolescent in the study exhibited symptoms of anxiety problems. However, despite this very high rate, Chinese adolescents in the 2008 study in this study were not functioning in an impaired range. It was argued that consistent with the Confucian and Taoist philosophies, shy and inhibited behaviours are valued and encouraged in Chinese culture, and that shy-anxious children in China are regarded as socially competent and understanding (Chen, Rubin & Li, 1995).

In Hong Kong, it was reported that the rates of hyperactivity are double those reported in other countries such as the United States (Ho et al, 1996),. At the same time it was recognised that suppression of aggression, anger and strong emotions or overt behaviours is part of the Chinese, as well as Thai culture (Weisz, Weiss & Suwanlert,

2006). It was argued that this cultural suppression may lead parents to have a lower tolerance threshold for their children's hyperactive behaviour and therefore increased the likelihood of reporting hyperactive and disruptive behaviours found in relevant resaerch. A cross-cultural difference in professional and teacher assessment using a behaviour rating was also evident in a study by Mann et al. (1992). Here, raters were exposed to videotaped vignettes of students' behaviour using a scale of items derived from DSM-III-R criteria for ADHD, oppositional defiant disorder, and conduct problems taken from the Conner Abbreviated Teacher Rating scale (ATRS, Conners, 1973). It was reported that ratings from Chinese and Indonesian professionals were significantly higher than those from American and Japanese professionals.

2.3.2 Externalising problems among adolescents across cultures.

While antisocial behaviour may appear temporary for some adolescents, a number of young people may demonstrate a stable and persistent antisocial behaviour that continues into adulthood (Moffit, 1993). To some degree, different trajectory groups were partially confirmed in some Western studies and comprising samples of mostly male adolescents using single informant reporting problems (White, Bates, Buyske, 2001; Lacourse, Nagin, Tremblay, Vitaro & Claes, 2003). In contrast, another study failed to find evidence that would identify a group trajectory indicating late onset of problem behaviour, although there were groups with high levels of externalising problems when they started schooling. It is interesting to that in this case the majority of the participants became well adjusted as they grew older (Nagin & Tremblay, 1999). However, a study of this type is less generalisable because it was comprised of mainly culturally homogenous white males. Several nationally representative samples in the United States and Canada found conduct problems and delinquency to be more common among boys across the 4 to 17 years age range (MaDermott, 1996; Achenbach, 1991; Tremblay et al., 1996; Stanger et al., 1997). Similarly, when a study did comparison of problems reported by parents of children from 12 different cultures, observed problems related to externalising issues were significantly higher among boys compared to girls (Crijinen, Achenbach & Verhulst, 1997).

At the outset, it is crucial to highlight that across different studies, there exist inconsistencies in the operational definitions of attention deficits with hyperactivity problems in population-based studies (Polanczyk, Silca de Lima, Horta, Biderman &

Rhode, 2007). Recently in a systematic review of 102 worldwide studies of Attention Deficit Hyperactive Disorders/Difficulties (ADHD), significant variations in the prevalence rates of the problems across continents were reported (Polanczyk et al., 2007). This review reported significant differences in the prevalence estimates found between North America, Africa and the Middle East, but not among research population in North America, Europe, Asia, Oceania or South America. It was highlighted that the differences in rates were attributed to differences in instrumentation, methods and definitions used across studies. Furthermore, it was found that the extent to which the difficulties of hyperactive/inattentive problem varied might also be due to differences in the thresholds of what is considered pathological by each culture and by research available when viewed through different cultural lens.

A study that looked at public awareness of parents from two ethnic backgrounds reported that African American parents were less likely than white respondents to have heard of ADHD. They were also more likely to attribute hyperactive behaviour to excessive sugar in the child's diet (Bussing, Schoenberg & Rogers, 1998), hence such parents may not necessarily see hyperactivity as a problem. Furthermore, African American and Asian/Pacific Islander parents held etiological beliefs about their child's emotional/behavioural problems that were more sociological in nature and less consistent with biopsychological explanations compared to non-Hispanic whites (Yeh, Hough et al., 2004). Evidence suggested that Mexican American parents place a high value on parental authority (Rosello & Bernal, 1996) and are therefore more likely to view their child's problems as a matter of ineffective discipline rather than a mental health concern needing to be addressed with psychotherapy (McCabe, 2002). These cultural differences at the problem recognition stage illustrate how parents from a particular culture may be less likely to recognise their child's EBD as needing help with their EBD, or even seeing it a problematic.

Another example of how cultural belief can affect parents' perception of hyperactive problems lies in the way parents view the child's eye contact. While Western parents would recognise earlier reduced eye contact, Asian culture would not consider it to be part of an impaired nonverbal behaviour because, for Asian, direct eye contact with those in authority is considered to be a sign of disrespect. In another study (Moon,

2011), parents and teachers in Korea and the US similarly showed different views of understanding hyperactivity. Teachers in Korea viewed those students who were hyperactive and liked to disturb others as causing an offence to the teacher's authority. Teachers also believed they are responsible for discipline students who misbehave Failing to manage a hyperactive child and involvement of third party would worry them due to loss of face. On the other hand, US teachers seemed to recognise hyperactivity as a clear distinct difficulty and would refer to third-party in the school. The teacher would be concerned over the student losing instruction time, rather than any third-party involvement. Korean parents who are grounded in Confucianism believe that obedience is seen as an essential value to family harmony; therefore, a child who they see as hyperactive is thought of as lacking in parental discipline. In contrast, US parents seemed more aware on the presence of their child hyperactive difficulties and would need more readily consider seeking medical attention to deal with the issue and its causes. Generally, both parents and teachers in Korea seemed not to recognise hyperactivity as a distinct difficulty, and possibly relate it more to emotional difficulties, since they perceived ADHA as the outcome of inadequate parenting skills.

2.3.3 Peer and social problems of adolescents.

In addition to internalising and externalising problems experienced by adolescents, another form of difficulty commonly cited related to social problems, in particular peer relations. Such peer and social problems include the feeling of loneliness to more serious problems, such as bullying. Below is a review of peer related problems among adolescents. Whilst it is evident that the process of socialisation and individuation occurs in all cultures, the developmental time frame, its goals and practices are often unique to particular cultures (Cooper 1994). The school class is a key setting for peer relations to form and develop; relationships which appear to become increasingly important sources of interaction and support as children grow older and reach adolescence. On the one hand, friendships can support adolescents in their normative transitions across development (Hay, Payne & Chadwick, 2004). However, relationships can at times create frictions in other spheres of life, such as relations with parents that 'don't work' relations with parents (Sentse, Lindenberg, Omvlee, Ormel & Veenstra, 2010). On the other hand, failure to form supportive friendships with peers can be detrimental which can cause threats to one's well-being and

development (Bukowski, Laursen, & Hoza, 2010). It is also important to recognise that socialising processes among adolescents in particular with peers is also a reflection of what is valued according to the norm of the culture (Rothbaum, Pott, Azuma, Miyake & Weisz, 2000). In this review, it was found that harmony is more valued in Japan than in the U.S., in the former nation, Japanese youth will in general, continue to place emphasis on stability and continuity of relationships with parents and peers. By contrast, adolescents in the U.S. commonly need to individuate from parents and transfer their allegiance from parents to peers. Once again, the broad dimensions of social-cultural behaviour that best distinguished Japan from the United States represent the collectivist and individualistic dichotomy respectively.

In an international comparative cross-sectional study of 28 countries (i.e. in Europe and North America), a large-scale study was conducted on bullying and symptoms among school children aged 11, 13 and 15 years of age. The highest prevalence rate was reported among boys in Lithuania (41.2%), while the lowest rate was observed among girls from Sweden (6.3%). In a different study, bullying was also seen as a peer problem among adolescents in Tanzania (Wilson, Celedonia & Kamala, 2013), but it was reported to experience be lower than those in Ghana (Owusu, Hart, Oliver & Kand, 2011) and South Africa (Liang, Flisher & Lombard, 2007). In a study among Chinese adolescents age 11 to 20 from 6 secondary schools in China (Sun, Dunne, Hou, Xu, 2013), peer emotional bullying was found to be significantly associated with stress in school, as measured by the Educational Stress Scale of Adolescents (ESSA) scale (Sun, Dunne, Hou, Xu, 2013)

In China adolescents are expected to spend more time with their families which is a common practice of Eastern culture, as compared to Western families where adolescents tend to spend more time with their peers (Petot, Rescorla, Petot, 2011). Although Asian adolescents spend more time with their family, they expressed more difficulty discussing problems with their parents, and tended to be more careful about what they say to their parents (Rhee, Chang, & Rhee, 2003). This caution is perhaps seen as a fear of disapproval from the parents because disapproval places a huge burden on the parent-child relationship. Research in understanding peer problems among adolescents within the Asian region appears to be lacking. For instance, parents and teachers in China (Du et al., 2008), Thailand (Woerner et al., 2010) and Malaysia (Stokes et al., 2013) could not identify items of peer problems as a distinct

peer difficulties when using the SDQ, Western designed measure. It was suggested that the concept of peer problems as assessed by the this measure might appear irrelevant or inappropriate within the cultural context of those study (other types of difficulties will be discussed further in chapter 3)

2.4 Summary of Chapter 2

This chapter has discussed the impact of different cultures on the development of acceptable behavioural norms and how they may differ according to a particular culture. It highlighted how cultural values are transmitted and what might be seen as normal behaviours in one culture might be interpreted as a problem in another culture. It is important to recognise cultural elements that drive different practices that carry personal experiences and that are valued according to the norms of the society. Whereas research has identified broad differences between the West and the East, this has been qualified by the fact that there are major cultural differences within the Western and Eastern societies. It is important to recognise that some methodological approaches such as the use of different instruments for assessing EBD, the recruitment of samples sizes might influence how EBD is interpreted, as well as being aware of how this interpretation could affect the generalisation of the findings. This chapter has highlighted the presence of some differences in what is identified as problematic behaviour and because some behaviour is interpreted differently between the West and East, it is also possible to expect that many of the Western designed measure might not necessarily fit well with how Eastern cultures describe problematic behaviours. Hence it is important to explore the factor structure of any measures that are developed outside of one culture, in order to to ensure the reported problems actually reflect problems similarly understood across different cultures The next chapter will provide a detailed overview of how some items in the measure of SDQ and YSR measuring instruments, when used in a different culture. are viewed differently from what the SDQ and YSR are intended to measure when used in a different culture.

CHAPTER 3
CULTURAL INFLUENCE ON ASSESSMENT MEASURES FOR EBD USING THE SDQ AND YSR: PSYCHOMETRIC EVIDENCE

3.1 Introduction

The previous chapter addressed the impact of culture on the development of acceptable norms across different cultures. Also noted were views of parents, teachers and adolescents across various cultures on what is seen as problematic behaviour through their cultural lens. The purpose of this chapter is to provide a more detailed overview of research relating to the psychometric properties (i.e. the validity and reliability) of using the Western designed SDQ and YSR. This section will look closely at how parents, teachers and adolescents in the West and East respond to those Western measures of SDQ and YSR. The research that forms this thesis compares the views of respondents of Western studies with those of Eastern respondents to explore whether the responses of parents, teachers and adolescents in Brunei are more comparable to Western or Eastern cultural views on EBD. As seen in the previous chapter, views on acceptable norms and problematic behaviour serve to reveal some differences across cultures. We would also expect that Eastern culture will reflect a different conceptualisation of behaviour problems compared to that from the Western cultures.

The previous chapter highlighted the presence of cultural differences in describing Emotional and Behavioural Difficulties (EBD) across different cultures, mainly comparing studies from the Western and the Eastern regions; so setting the cultural context of the studies outlined in this thesis. This section will look at the reviews of by parents, teachers of the SDQ measure and will consider the review of the YSR by adolescents; the reviews from each of the three respondent groups will be dealt with separately. Firstly, the study review will focus on examining the factor structure of SDQ and YSR measures when employed in international studies in order to explore the presence of any cultural influence in their reports. Secondly, the review will focus on the usefulness of the existing subscales of SDQ and YSR in reporting the difficulties, informed by t evidence of reliability and validity. Thirdly, the research will explore how respondents across different cultures report the presence of age and

gender effects when using the SDQ and YSR to report on adolescents' EBD. Finally, this section will conclude with a review on the presence of norms (or cut-off points) that have been reported across different cultures using the SDQ and YSR. Based on the previous chapter, it is expected that some differences in responses would be more likely to occur in responses from the Eastern regions than those coming from Western region.

3.2 International Studies of the Parent SDQ

3.2.1 Evaluation of the factor structure of the SDQ

The original (Goodman, 1997) study will be looked at first to understand how the parents' parents factor structure was formed and how similar or varied responses to SDQ are when used across different cultures. The studies by Goodman (1997, 2001) initially explored the factor structure of parents' SDQ using the Exploratory Factor Analysis (EFA) and varimax rotation was adopted. The "Eigenvalue greater than 1.00" generated a six-factor structure for the parent SDQ. However, the sixth factor has an Eigenvalue of only 1.02 and therefore a five-factor solution was chosen as the predicted number of factors on theoretical grounds. The loadings of predicted factors were higher on the predicted factors than the loadings on the additional factors. The reliability of the parents' SDQ indicated higher internal consistencies for all 4 subscales, except for peer problems, which yielded Cronbach's alpha of only 0.57.

Several other studies in the Western samples also found good support for the existing factor structure of SDQ using the EFA. This was the case in the Netherlands (Muris et al., 2003), in Germany (Woerner et al, 2004), across 10 European countries such as Austria, Denmark, France, Germany, Iceland, Italy, the Netherlands, Norway, Switzerland and the UK (Becker et al., 2006), and another Germany study using both EFA and CFA (Confirmatory Factor Analysis) (Rothenberger et al., 2008). These all revealed similar responses in producing the five-factor structure from various SDQ translations when parents' reports were studied. However, some community studies did not find support for the five-factor structure, for example, in Australia with a sample of 7-17 year olds (Mellor & Stokes, 2007) and in the U.S. a sample of 4-17 years old (Dickey & Blumberg, 2004).

In Australia, although study did not provide evidence for the factor structures of SDQ, they argued that the analysis of several items of SDQ did not fit a unidimensional model. This conclusion would suggest which suggest that some items should be reframed or excluded. In a U.S. study, although a five-factor component was derived, the scales measuring peer problems and conduct problems were represented by fewer than the intended five items. Two items from the conduct problems deviated from the predicted factor as the item measuring '*tempe'r* related closely to hyperactive-inattentive and the item measuring '*obedient'* related closely to prosocial behaviour. The peer problem scale was even less unidimensional with 2 items (*has at least one good friend and popular*) relating closely to prosocial behaviour, whereas being *bullied* related closely to emotional problems.

When studies were carried out in the Eastern region, in particular within the East Asian communities, there appeared to be a mixed support for the existing five-factor structure. In China (Du et al., 2008), community samples of 3-17 year olds (n=1965), found responses from parents only supported 3 factors of the 5-factor structure; the supportive factors being the: i) prosocial, ii) hyperactive-inattentive and iii) emotional subscales). There was a clear split between parents' responses relating to hyperactive and inattentive problems. Two hyperactive items (*restless* and *fidgeting*) had higher loadings onto conduct problems. This indicated that Chinese parents were more likely to view these problems as conduct problems rather than hyperactive problems. The loading of somatic problems was also very low (0.334), implying that parents might not really recognise somatic problems as stemming from, or being caused by emotional difficulties; for such parents the concepts 'psychosomatic' appeared not to exist.. Parents in China view items of conduct problems as two separate types of conduct problems (i.e. Conduct 1 & 2). Interestingly, Chinese parents did not recognise any items described as peer problems by the SDQ. In another study, involving Japanese parents' responses (Moriwaki, 2014), there appeared to be slightly better support for almost all of the existing 5-factor subscales. However, compared to Chinese parents, the loadings of the items on respective scales were only moderate; that is, slightly lower than those reported in China. In Japan, the very low loadings were for items *fidgeting* of hyperactive-inattentive problems, *somatic* of emotional problems, *disobedient* and *stealing of conduct problems.* Parents did not see these items as problematic. Moving closer to South East Asian samples, the lack of factor

structure was even more apparent with samples from Thailand (Woerner et al., 2011). Samples from Thailand with children aged between 5 and 16 years (n=9,491) revealed that only 2 subscales provided a better response in describing prosocial and emotional problems. Parents reported hyperactive problems as separate from attention problems, but did not see attention as problematic behaviour. *Somatic* problems also have a low loading onto the emotional scale (i.e 0.4). Parents also seemed to only recognise 3 items labelled as conduct problems: *fighting, stealing* and *lying.* Finally, parents in Thailand did not view any items as peer problems. Mellor et al (2007) also carried out a similar study with samples from Malaysia. However in that 2007 study, they did not use the questionnaires from the official website (www.sdqinfo.com), as recommended by Goodman. Instead, they did back-translation independently and some adjustments were made to the original translation. Hence, this instrument modification raises a methodological issue: 'would respondents might have responded differently if they had employed the original Malay translation of the SDQ provided on the website?'.

3.2.2 Internal consistencies of the existing five-factor structure of SDQ

The purpose of this section is to consider how useful the existing subscales of SDQ are, in spite of the lack of support for the five-factor structure in some countries. The reports of reliability coefficients across other studies were compared using the Pearson Product Moment Correlation established by Cichetti and Sparrow (1981): 0-0.4 poor; 0.4-0.59 fair; 0.60-0.74 good; 0.75-1.00 excellent. Several studies carried out within their communities: Finland (Koskelainen et al., 2000), The Netherlands (Van Widerfelt, 2003, Muris et al 2003), Germany (Rothenberg et al, 2008; Woernet et al., 2004), the UK (Goodman, 2001); Norway (Van Roy et al., 2008), Sweden (Malmberg et al., 2011), Thailand (Woerner, 2011), Malaysia (Mellor et al., 2007) and in cross cultural studies involving 10 European countrie, as cited above s(Becker et al., 2006) All these studies yielded 'good' to 'excellent' Total Difficulties Scores (TDS), emotional subscale and prosocial subscale. The one exception was China (Du et al., 2008) with TDS of only 0.59. In other words, the overall SDQ measure is said to provide a good description of the general difficulties of adolescents based on responses from parents across both Western and Eastern region; the exception being China. Some of these countries yielded low to fair internal consistencies for the remaining subscales of SDQ. For instance, conduct problems had a low to fair

reliability coefficient in Finland (0.59), Germany (0.58), the Netherland (0.55), Malaysia (0.48), Thailand (0.57) and China (0.48). The hyperactivity-inattentive subscale also had a low reliability coefficient in a study conducted across 10 European countries which yielded an average Cronbach's alpha of 0.58. The peer problem subscale had the lowest Cronbach's alpha in most participating countries; exaples being: in the UK (0.57), Norway (0.56), Germany (0.58), Sweden (0.52), Thailand (0.17), Malaysia (0.23) and China (0.30). In other words, these low internal consistencies suggested that some items within the subscales of SDQ were not recognised by adolescents' parents as a distinct difficulty.

3.2.3 The concurrent validity of the existing factor scale.

Concurrent validity is commonly required for a test to evaluate the degree of association where the scores of the questionnaire in the study relate in a theoretically similar way to another construct in a different questionnaire. The concurrent validity of SDQ was most frequently tested against the Child Behaviour Checklist (CBCL) mainly with Western studies such as samples from The Netherlands (Winderfelt et al, 2003; Muris et al., 2003), Germany (Klasen et al., 2000) and Finland (Koskelainen et al., 2000). Among the related subscales measuring conceptually similar domains, good validity (>0.65) was observed in the study population from all these countries between SDQ Hyperactive and CBCL attention problems. The next good validity report was observed between SDQ conduct problems and CBCL externalising problems (Koskelainen et al., 2000 & Winderfelt et al., 2003). The latter result was supported by the high correlation between SDQ conduct problems and CBCL Aggressive problems. There was also good validity reported on other related subscales, in particular between SDQ Emotional and CBCL internalising problems. The latter result was informed by the high correlation between SDQ emotional and CBCL Anxious problems among the Dutch and German samples. Despite evidence supporting good validity of these measures, poor validity was also present across some domains between the SDQ and CBCL. In one study, poor validity was evidenced for SDQ emotional and CBCL somatic problems, similarly for SDQ peer problems and CBCL social problems. In another Dutch sample (Muris et al,. 2003), only the broader total scores, internalising and externalising subscales of CBCL were correlated with TDS, emotional and conduct problems respectively, all generated good validity values ranging from a Pearson Product Moment Correlation of 0.60 to

0.70. In contrast, a study in Finland (Koskelaine et al., 2000), only recorded good validity factors for SDQ conduct problems with all CBCL externalising problems including subscales measuring delinquent and aggressive behaviour. The Finnish study also found good validity between SDQ hyperactive and CBCL Attention problems. All SDQ emotional scale and peer problems recorded poor validity for all domains measuring related problems of CBCL.

An overview of the SDQ parent version yielded acceptable sound psychometric support for its use mainly within samples from Western populations. Several positively worded items tended to confound the SDQ factors i.e. deviation of loading of items from problem scale to prosocial scale. There was a clear split (diversion) of items measuring the hyperactive-inattentive subscale with samples from China (Du et al., 2008). Here, Chinese parents tend to view "being restless" and "fidgeting" as conduct problems. This finding suggests a culturally influenced perception where parents in China do not tolerate such behaviours and would therefore mark them as acting out problems. On the other hand, the peer subscale was not identified as a distinct factor describing peer problems within samples from the Asian region. Evidence of poor factor structure is also apparent in the internal consistencies assessed by Cronbach's alpha on some of the subscales, again an issue is significantly more apparent in the Asian cultures. Finally the concurrent validity that was only available for samples from the western population indicated good validity mainly on the SDQ conduct problems and corresponding externalising problems. This calls for further studies to explore whether the SDQ could provide validity support if used in Asian countries like Brunei. This current research will be the first kind of study that could add to our understanding of the value of using the SDQ within the Asian context, particularly among those Malay populations.

3.3 International Studies of the Teacher SDQ

3.3.1 Evaluation of the factor structure of the SDQ

The original (Goodman, 1997) study will be looked at first to understand how the SDQ teacher factor structure was formed and how similar or varied responses to the SDQ were when used with different cultures. The study by Goodman (1997) initially explored the factor structure of the teachers' SDQ; using the Exploratory Factor Analysis (EFA) and varimax rotation were adopted. The "Eigenvalue greater than

1.00" generated the five-factor structure for the teachers' SDQ. The loadings of predicted factor were high for 24 of the 25 teacher-report items except for the item measuring *obedient* which loaded higher on Prosocial and Hyperactive-inattentive problems. The reliability of the teacher SDQ was also reported high across all 5 subscales.

There are few studies from the West examining the factor structure of the teacher SDQ with samples from the community populations. The teacher SDQ factor structure was mainly examined in community samples from Australia (Mellor & Stokes, 2007), China (Du et al., 2008), Italy (Tobia et al., 2013) and Japan (Moriwaki et al., 2014). In the Australian samples, although no factor structure was presented in their report, analysis of several items of teachers' SDQ failed to provide evidence for the existing factor structure. This was similar in the parents SDQ report mentioned earlier where some items needed to be reframed or excluded. There was some support for the emergence of the five-factor structure in a study that examined responses of teachers in Italy, yet they rated 2 hyperactive items as conduct problems (Tobia et al., 2013). In the Chinese samples, only 2 subscales appeared to support its factor structure: prosocial and emotional subscale (Du et al., 2008) There exist several items that loaded on different factor structures. There was a clear split of view between hyperactive and inattentive problems. Two hyperactive items (i.e. restless and fidgeting) had higher loadings in conduct problems. This bias indicated that Chinese teachers were more likely to view *restless* and *fidgeting* as conduct problems rather than hyperactive problems. The loading of somatic problems was also very low (0.473), implying that teachers might not really recognise somatic problems as emotional problems. Only 2 of 5 items of peer problems seemed to load well on the last factor describing peer problems. Three reverse items (i.e. obedience, good friend and popular) were not recognised as having any difficulties, and loaded onto the prosocial scale. In another study, involving Japanese teachers' responses, there appears to have been good support for all of the existing 5-factor subscales. Only 2 reverse items (obedience and popular) were not viewed by teachers as any difficulties. Instead, loadings were seen to be on the prosocial scale. Finally, responses of teachers in Thailand and Malaysia were not analysed for their factor structure pattern but only for their reliability. This will be reviewed in the section below.

3.3.2 Internal consistencies of the existing five-factor structure of SDQ

The Pearson Product Moment Correlation was used for comparison with the standard reliability coefficients developed by Cichetti and Sparrow (1981): 0-0.4 poor; 0.4-0.59 fair; 0.60-0.74 good; 0.75-1.00 excellent. Several studies carried out with community samples of adolescents include samples from the Netherlands, Australia, Finland, the UK, Thailand, Malaysia, China and Italy. They all indicated good internal consistencies for the Total Difficult score (TDS), Emotional, hyperactive-inattentive problems and prosocial scale. The remaining difficulty scales were also observed to have good internal estimates for all countries from the West, in contrast to countries from the East where lower internal consistencies were recorded on the remaining subscales. For instance, samples from Malaysia recorded low internal estimates of Cronbach's alpha with 0.58.Additionally, Cronbach's alpha of peer problems was reported to be very low with samples from Thailand (0.21), Malaysia (0.30) and China (0.48). In other words, these low internal consistencies reflected that some items within the subscales of SDQ were not seen by teachers of specific difficulties as predicted by the SDQ measure.

3.3.3 The concurrent validity of the existing factor scales

Concurrent validity is commonly required for a test to evaluate the degree of association where the scores of the tool in the study relate in a theoretically similar way to another construct in a different questionnaire. Unlike the parent SDQ which underwent several concurrent validity s with Achenbach's questionnaire of CBCL across different translations, there exist only a limited number of studies where teacher SDQ is assessed for its concurrent validity with the TRF. The earliest study was carried out by Becker et al.(2004) where responses from teachers' reports of SDQ demonstrated good evidence of validity with the broader aspects of the Teacher Report Form (TRF) of Achenbach's measure. In particular, a good report of equivalence was shown when comparing the SDQ with the corresponding domains of TRF on the Total Difficulties Scores, internalising problems, externalising problems and attention problems. However, because Becker's study employed clinical samples it is expected that high correspondence would exist between two related measures, which is less likely to show strong validity with studies employing community populations. Another study measuring concurrent validity of teachers' SDQ was presented in two studies from the Flemish (Van Leeuwen et al., 2006) and Dutch

communities (Mieloo et al,. 2013) samples. In the Flemish sample of 512children aged 4-8 years old, it was reported that good validity could be found in all subscale of SDQ with the TRF of externalising problems. In particular, this result was informed by the high correlation between SDQ conduct and TRF aggressive problems. High validity was also recorded between SDQ hyperactive and TRF attention problems. However, lower correlation validity was detected in most of the SDQ emotional scales and TRF internalising problem scales, with the latter lower validity evidenced by the low correlation between SDQ emotional and withdrawn problems. In another study with a Dutch sample among children aged 5-6 years old, the validity of the correlation between teachers' SDQ and TRF were analysed according to the different ethnicities of the children living within Dutch society (Dutch n=516, Surinamese n= 60, Antillean/Aruban n=21, Turkish n=37 and Moroccan n=58). Among the 5 ethnics backgrounds of the children, responses relating to Antillean/Aruban background showed lower corresponding validity on emotional symptoms and conduct problems of SDQ with the Internalising and externalising problems of TRF respectively. However, this outcome could possibly be due to the small sample from this ethnic group, in comparison to children from the other 5 backgrounds. Lower validity was also evident across all the samples. For instance, low validity was recorded for emotional symptoms of SDQ and somatic complaints of TRF, and hyperactive-inattentive of SDQ with social problems of TRF. However, it is important to note that the analyses in this Dutch research included very small groups of young children with a range of other ethnic backgrounds in comparison to fairly high numbers in the Dutch group. Since reports on the validity of teachers' responses of SDQ and TRF is limited, this underscores the need to evaluate how well teachers' responses would relate to the corresponding domains on the TRF, considering that parents' version of SDQ has shown good validity with the parent CBCL.

At present, the factor structure of the teachers' SDQ used in community samples needs further evaluation across different cultures. With available data, studies indicate that several items tend to deviate from the predicted factor. In particular, in two studies from China and Italy, it was found that teachers in these countries tended to view the adolescent behaviour of "*being restless*" and "*fidgeting"* as conduct behaviour rather than hyperactive problems. This orientation suggests a cultural perception where teachers in China and Italy did not provide similar responses to the

original study and instead would mark *being restless* and *fidgeting* as acting out problems. Teachers across diverse cultures seemed to be more similar in their responses as indicated by a greater internal consistency of the SDQ when compared to the responses of parents. Consequently, this result suggests that teachers form a more homogeneous group than parents who are from a wider range of social classes and educational backgrounds (Kresanov, Tuominen, Piha & Almqvist, 1998). Despite that, the peer problem subscale continues to show fewer consistencies when carried out within the Asian region. Finally, there is a need for more reports to be available on the validity of the SDQ with the TRF especially among adolescents. This approach is crucial since previous studies indicated an acceptable support observed among younger samples. This calls for further study to explore whether the teacher SDQ can demonstrate concurrent validity if used in Asian countries like Brunei. Similar to the current Malay SDQ parents' version, the teacher version of SDQ will be the first kind of study that could add to our understanding of the value of using the SDQ within an Asian context, particularly among the Malay populations.

3.4 International Studies of the Adolescent YSR

3.4.1 Evaluation of the factor structure of the YSR

The original study (Goodman, 1997) will be looked at first to understand how the YSR factor structure was formed and how similar or varied responses are to the YSR are, when used across different cultures. The initial factor structure of the YSR was derived from the analyses of clinical samples by Achenbach and Edelbrock (1987); it was subsequently refined through analyses of new samples (Achenbach, 1991; Achenbach & Rescorla, 2001). The sample used to derive the 2001 syndromes included children recruited through the U.S. National Survey of Children, Youth and Adults, plus clinically referred youths from Australia, England, and the United States (Achenbach & Rescrola, 2001). The 2001 eight-factor syndromes are identified as i) Anxious/Depressed, ii) Withdrawn/Depressed, iii) Somatic Complaints, iv) Social Problems, v) Thought Problems, vi) Attention Problems, vii) Rule-Breaking Behaviour, and viii) Aggressive Behaviour. These syndromes correlate highly with the 1991 versions of the YSR syndromes (Achenbach, 1991). Second-order factor analysis of the correlations between the eight 2001 syndromes for YSR yielded a broad internalising group of syndromes (Anxious/Depressed, Withdrawn/Depressed, and Somatic Complaints) and a broad externalising group of syndromes (Rule-

Breaking Behaviour and Aggressive Behaviour). The reliability of the adolescent YSR indicated high level internal consistencies for all 8 syndromes with the highest Cronbach's alpha recorded for Aggressive Behaviour (0.94) and the other remaining subscales were above 0.77. Both the broadband scales and the total problem scale were also high at above 0.90.

The factor structure of YSR was also reported in other community studies such as in Japan (Kuramoto et al., 2002), U.S. (O'Keefe, 2006), across 23 different societies (Achenbach et al., 2007) and cross-cultural studies between Germany and Jamaica (Lambert & Essau, 2007). In the majority of these community samples, it was reported that there was a lack of fit for the 8-factor structure of the US model. Within Western samples, such as the U.S., O'Keefe and his colleagues (2006) suggested a shorter version of the YSR. Initially in their study, using EFA and Eigenvalues greater than 1.0 produced a 29-factor structure and it was reported either statistically or theoretically meaningless. This structure was clearly neither of great use nor was it was not the most parsimonious. Through several iterations of seven primary factors, a simple factor structure was identified. This however led to the number of items being reduced from 102 to only 53 items. In a cross-cultural study with samples from Germany and Jamaica (Lambert et al., 2007), it was reported that within the community samples or non-referred adolescents, the existing YSR 8-factor model might not be appropriately specified for non-referred adolescents' ratings in Germany and Jamaica. Instead a 2-factor solution, with items that are similar to the broadband groupings for the YSR was suggested as the most appropriate factor model for these samples. However, there exists differences between the 2-factor model and the original second-order factor model that was already established for the YSR. The 2-factor model contained multiple items from the subscale of thought problems, attention problems and social problems that loaded on both internalising and externalising factors, labelled as indicators of mixed first-order factors. The tendency for those items from the three mentioned subscales to load on the internalising and externalising problems were already established for the YSR in other earlier studies involving clinical samples (Achenbach, 1991; Song, Singh & Singer, 1994). However, Achenbach (1991), previously argued that the loadings of the three subscales on either broadband syndromes was not significantly high enough and nor were they consistent for each sex or age group. It was concluded that these three

subscales needed to have distinct narrow concepts measuring merely thought problems, social problems and attention problems which is distinct from other subscales of YSR which could support the loadings of items onto either the externalising or internalising factors. In contrast to previously mentioned studies showing the lack of a YSR 8-factor model, a diverse sample comprising of 23 societies reported that the 8-factor/syndrome taxonomic model met criteria for good fit to the data from each society when using CFA. However, it could be argued that the report will need further verification (such as convergent validity) of the concept defining the narrow 8-factor syndrome, because cross-cultural studies involving large societies may reflect differences in the way they comprehend problems. This issue was evident in some of the items with non-significant loadings, at least 16 items from Sweden, 4 items from Puerto Rico, 2 items from Norway and 1 item from Ethiopia (Achenbach et al., 2007). There is only one available study which evaluated the factor structure of the YSR in the Eastern region, in which the Japanese adolescents' responses showed a better fit for 6-factor symptoms (Kuramoto et al., 2002).

3.4.2 Internal consistencies of the existing eight-factor structure of YSR

Despite the lack of support for the emergence of the eight-factor structure, the majority of studies involving community samples have been shown to offer good reliability estimates when used across different countries. Countries like Sweden, America, Norway and Germany provided similar good total problem scores. However, at the difficulty subscale level, a sample from Sweden aged 13-18 years (Broberg et al., 2001) only identified somatic complaints (girls 0.72; boys 0.68) and attention problems (girls 0.66; boys 0.70) with acceptable reliability. The lowest internal consistency was found for the scales of withdrawn, social problems and thought problems (0.51-0.64). Similarly, satisfactory Cronbach's alpha was also recorded in French YSR scales ranging from 0.83 to 0.92 (Wyss et al., 2003). Within the Asian countries there exist fewer psychometric studies on the use of YSR with community samples. A Vietnamese and a Chinese version (Loughry & Flouri, 2001) have been used with Vietnamese and mainland Chinese samples of children and adolescents, respectively. The internal consistencies for both versions reported satisfactory internal consistencies with internalising, externalising and total problem scores for the Vietnamese version (recorded at 0.83, 0.72 and 0.90 respectively). The Chinese sample recorded a higher total problem score of 0.93 (Liu, Guo, Liu & Sun,

1997). Similarly, satisfactory Cronbach's alpha was also recorded in the French YSR scales ranging from 0.83 to 0.92 (Wyss et al., 2003). However, it is important to highlight that longer instruments usually increases the reliability of the test regardless of whether the test is homogeneous or not (Dennick & Tavakol, 2011). This supports the findings in most studies where evaluation of the poor factor structure for the YSR measures is still providing evidence of good internal consistencies. Despite limited psychometric evidence for YSR, particular in in terms of its utility within the Asian region, it has been argued that the YSR (one of Achenbach questionnaires), is the most popular questionnaire on child and adolescent psychopathology published since the 1970s (Leung & Wong, 2003). Therefore, a continued effort in exploring the Malay translation of YSR is considered crucial

3.5 Age and gender effects of SDQ and YSR across several studies

In addition to previously discussed psychometric properties of the parents' and the teachers' SDQ, several studies across community samples have demonstrated some relationship effects of the SDQ scores across the existing subscales relating to age and gender. This section will examine whether the ratings of parents, teachers and adolescents show any age and/or gender effects in their responses across different studies. Initially the age effect of SDQ and YSR will be examined, followed by the gender effect of SDQ and YSR.

Across different studies, there appear to be some similarities in the age effect of the SDQ responses from parents. For instance, in the Netherland and China, parents' scores showed a decrease in emotional problems as their children's ages increased (Winderfelt et al., 2003; Du et al., 2008). Similarly, scores of hyperactive-inattentive problems also showed a decrease in ratings with age for samples from the Netherlands (Winderfelt et al., 2003), Germany (Rothenberger; et al., 2008; Woerner et al., 2004) and in studies across different European countries (Becker et al, 2006). In another separate study with Chinese samples, a similar pattern was observed by ratings of both parents' and teachers' reports of SDQ. The peer problems scale was also rated higher for younger adolescents by parents' ratings of SDQ with samples from Germany (Woerner et al, 2004) and in a cross-cultural study with 10 European countries (Becker et al., 2006). In some cases, the same pattern was only observed among responses from teachers' ratings (Du et. al., 2008). The conduct problems

scale did not show any significant age effect in most studies involving community samples. Finally, prosocial behaviour, which is known to receive higher ratings among older adolescents, was only significant in reports from parents in Germany (Rothenberg et al., 2008) and from teachers in Malaysia (Mellor, 2007). The use of YSR in reporting for age effects is still scarce especially within the Eastern cultures. In the West, a study of Spanish adolescents (Abad et al., 2002) found that only older adolescents experienced more attention problems. In Sweden (Broberg et al., 2001), adolescents' responses did not vary across all the difficulties scales for age and grade.

With the SDQ reports, gender effects across all difficulties subscales (except for emotional problems of SDQ and the TDS), have shown to be more pronounced for boys than girls. For instance, SDQ reports have higher scores for boys on conduct problems, hyperactive-inattentive problems, peer problems and TDS in samples from Germany (Rotherberg et al., 2008, Woerner et al., 2004), Thailand (Woerner et al., 2011), China (Du et al., 2008) and Italy (Tobia et al., 2013). In another study by Muris and colleagues (2003), a similar pattern of gender effects was found except that the hyperactive-inattentive scale demonstrated no difference between boys' and girls' expression of problems. On the other hand, evidence of gender effects on levels of emotional problems were reported to be consistent across the majority of the countries; girls are more likely to be identified as having internalising problems compared to boys emotional problems. Evidence has come from Germany (Rothenberg et al., 2008), Malaysia (Mellor, 2007) and across 10 European studies (Becker et al., 2006). In contrast, studies from the Netherlands (Winderfelt et al., 2003), Germany (Woerner et al., 2004), US (Dickey & Blumberg, 2004) and Italy (Tobia et al., 2013), reported no significant gender effects for emotional problems. The use of YSR in reporting for gender effects is still limited within the Eastern cultures. However, gender differences were found to be quite consistent across international studies of using the YSR. For instance, a review of studies involving 234 societies (Rescorla et. al., 2007) found that girls are significantly higher for 3 of the internalising difficulties i) Anxious/depressed, ii) Withdrawn and iii) somatic) and boys were consistently found to be likely to have externalising problems. Across all regions, a common gender effect could be seen in both Western and Eastern culture. For example, in the West at least with white U.S. sample (Adams, Kuebli, Boyle & Fivush, 1995) it has shown that parents do use more emotion words when talking with

daughters than sons. This socialisation could lead to increases in girls' expression of emotions and boys' decreased expressions of emotions over time as the children progress from infancy to adolescence.

The above review highlighted the presence of certain age and gender effects in some societies which possibly indicates that cultural expectations might have influenced parents', teachers' and adolescents' scores when rating the SDQ and YSR. As highlighted in chapter two above, different behaviours may present significant effect, informed by age and gender because social evaluation and expectation may be more pronounced in some societies than others.

3.6 Recommended banding of SDQ

Recommended banding of the SDQ scores is necessary in order to allow us to recognise adolescents who show difficulties with their emotional and behavioural problems at the clinical and borderline range. Identifying these students along with the characteristics associated with their problems would help professionals to provide assistance at an early point in order to attempt to avoid harm at a later stage of a child's development. Importantly, establishing the cut-off score for differentiating or categorising groups based on some levelling of scores must be accompanied by acceptable psychometric support with regards to the existing dimensions of the subscales. This prescription was best described in an exhaustive review by Cicchetti (1994). In other words, the existing subscales of SDQ provided constant support for the evaluation of its 5-factor structures that could be replicated across different cultures, thereby reflecting a similar understanding of the behaviour being measured.

In the original study by Goodman (1997), based on the UK samples the exact placement of cut-offs scores was split into 3 categories i) abnormal, ii) borderline and iii) normal scores. All subscales defining abnormal scores are those that fall within the 90^{th} percentile of the scores, borderline would be scores that ranges between the 80^{th} to 90^{th} percentiles and those of the normal group are based on any scores that fall below the 80^{th} percentile. Consequently, the parent SDQ abnormal range for all 5 subscales, together with the TDS are: i) Emotional problems (5-10); ii) Conduct problems (4-10); iii) Hyperactive-inattentive (7-10); iv) Peer problems (4-10), v) Prosocial behaviour (0-4); and the TDS (17-40). The abnormal range for teachers'

SDQ scores are recorded at: i) Emotional problems (6-10); ii) Conduct problems (4-10); iii) Hyperactive-inattentive (7-10); iv) Peer problems (5-10), v) Prosocial behaviour (0-4); and the TDS (16-40). As suggested by Goodman (1997), it is necessary to adjust the cut-off scores according to the characteristics of the sample in the study. Adopting the UK cut-off scores with samples from other countries may result in the risk of understating or overstating the reported behaviour rates. In other words, it might be wrong to categorise a population as falling under a specific clinical range when, in fact, the measured behaviour is said to be more acceptable or within the norm of that population's culture.

In comparison to Goodman (1997), cut-off scores with some other related studies in the East and West, reported different percentages for the clinical range. A study based on samples from German school-aged children who were 4-16 years old (Rothenberger et al., 2008) based on the parent SDQ, was itself based on Goodman's suggestion of percentiles defining targets. The study recorded slightly lower recommended banding for the total difficulties scores (16-40), whereas conduct problems and peer problems were recommended slightly above (5-10) in comparison to the UK cut-off scores. A study using a Thai (Woerner et al., 2011) school-aged population (aged 6-16) showed that the parent SDQ recorded slightly higher cut-off scores for almost all of the subscales except for the hyperactivity-inattention problem. In comparison with the UK cut off score for teachers, Thai teachers seemed to have slightly lower benchmarks for reporting conduct problems (5-10), and peer problem (6-10). However, it was noted that Thai teachers seemed to have slightly higher emotional expectations compared to those teachers in the UK. It is important to note that these findings, informed by the Thai norms across the subscales may slightly vary in comparison to the original UK samples. In the Thai study, the TDS appeared to have similar defined target rates as the UK, whereas for the remaining subscales, normal was defined at 85% and borderline plus abnormal was defined at 15%. Hence, such adjustments would directly influence the banding of the cut-off scores. In another study with samples from Malaysia (Mellor, 2007), norms were established separately according to gender. In the reports of parents' scores of adolescents, it was indicated that that parents' expectation for boys are higher for emotional problems, hyperactive problems, and their TDS. Across all subscales teachers definitely have higher expectations for older adolescents with slightly lower cut off scores than in

younger group. As for girls, parents' benchmarks were seen to remain similar for younger and older adolescents. This differed from teachers' responses in that their benchmarks were seen higher for older adolescents across all subscales. In another study with Chinese samples (Du et al., 2008), parent SDQ scores recorded a similar range to that of the UK samples for all of the subscales, except slightly higher ranges were seen in the Chinese banding for hyperactive and peer problem scales. On the other hand, teachers' SDQs recorded a higher range of cut-off scores for TDS (18-40), Hyperactive-inattentive (9-10) and Peer problem scale (6-10). Lower ranges were recorded for emotional problems (5-10) and prosocial problems (0-3).

Mellor (2005, 2007) in his studies with communities in Australia and Malaysia had argued for the use of the terms 'abnormal'/'clinical' and 'borderline' as proposed by Goodman (2001) in his original study. This argument also applied to other studies who used these references terms when describing their norms for the cut-off scores in particular to studies involving community samples. It was contended that such labelling might not be appropriate when used in clinical settings rather than samples from community populations. Instead Mellor suggested relabeling or including additional labelling of "query" at the borderline level, and "of concern" at the abnormal level, given that SDQ is primarily used as a descriptive tool in specifying the rates and distribution of problems in larger population rather than employed as a diagnostic instrument.

3.7 Summary of Chapter 3

In this chapter, an in-depth review was carried out on the psychometric evidence of SDQ and YSR as assessment tools for identifying Emotional and Behavioural Difficulties (EBD) across community samples of adolescent groups. Based on these related studies, there is a pressing need for more statistical evidence on the use of SDQ and YSR within the Asian context. In particular, the psychometric study of the Malay translation of SDQ only had one (1) study conducted in Malaysia and has never been evaluated in relation to its efficacy when used in Brunei population; a country where Malay is also the national language. Importantly, the exploration of the previous Malay SDQ did not use the same translation as that provided on the formal SDQ website. Hence this present study can be considered as a first attempt to explore use of the original SDQ Malay translation. Furthermore, as the researcher is aware

and through personal contact with the formal translator of the Malay YSR, the available translation of YSR has not been examined in relation to its psychometric evidence. Therefore, this study will attempt to investigate the usefulness of the original Malay version of SDQ for parents and teachers, and to some degree provide initial evidence on how well the YSR works as an assessment tool in representing adolescents' development and difficulties from Brunei. The next chapter (4) outlines the methodology, data analysis and the research questions pertinent to this study.

CHAPTER 4
RESEARCH METHODS

4.1. Introduction

The previous three chapters presented a review of the literature on psychological difficulties in adolescence, while taking into account different cultural perspectives; it also introduced the SDQ and YSR. These chapters indicated how various cultural values underpin the development of adolescents' emotional and behavioural development and difficulties. The aim of this chapter is to introduce the methodological approaches taken in this thesis, linking the previous literature review chapters with the subsequent three results chapters. This chapter will describe the design of the different elements of the research reported in this thesis. Information is provided on the participants (recruitment, demographic characteristics), procedure of data collection (including pilot study) in Brunei. Furthermore, the design of the measures chosen, and reasons for their selection, will be considered. Full details of data analysis on each measurement tool will be provided in detail in the relevant three results chapters that follow.

4.2 Design

The cross-sectional design was chosen instead of a longitudinal survey for the reasons described in Chapter 1 and 3. A cross-sectional design was practically chosen rather than a longitudinal survey because the study was carried out in Brunei and it was only possible to have two phases of data collection. Briefly, cross sectional design using the questionnaire approach was considered as a practical method in providing an overview of the reported cases of emotional and behavioural difficulties in Brunei. It allows some descriptive information in specifying the rates and distribution of difficulties experienced by adolescents in the general population. These data can then help inform a more focused study (analytic epidemiology) of the determinants of problems in future from specific groups identified from this preliminary study. This design if further analyse can provide abundant information on a wide range of relationship including population characteristics that impact on the development of EBD. This study also follows closely the design employed in many studies (as reviewed in chapter 3) which looked at reporting the psychometric evidence of using these measures across cultures. Similar statistics were not available from the Brunei

context that could inform the basis of this study. This study uses a quantitative approach and established measures to allow comparison to be made with other cultures. The main limitation of cross sectional surveys for this descriptive epidemiology is that they can only indicate pattern of aetiology. Such design can only establish associations between population variables rather than cause-effect mechanisms (Susser, 2001). These limitations means that extensive research will be needed to explore causal effects design which include longitudinal and intervention studies which will be an important goal for further research.

Adolescent school age students (between 11 to 16 years), parents and teachers were focused on as they would provide data that could be triangulated across these three respondents groups when young person emotional and behavioural difficulties. Adolescents between ages 11 to 16 years are at higher risk than younger group of being involved in behaviour problems, school failure, dropout and delinquency (Lerner & Castellino, 2002). Empirical studies have also shown that externalising problems among males such as, delinquency acts peak from 13 to 16 years of age (Farrington, 1992). Females are significantly more likely to internalise their depression and anxiety problems than males, and typical onset is around 13-15 years (Angold & Rutter, 1992). Interestingly several studies with Asian adolescents (age 11-15 years) found that they tend to internalise rather than externalise their problems, which suggest that cultural factors greatly influence their manifestation of emotional and behavioural difficulties (Weisz, Sigman, Weiss & Mosk, 1993). Expectation concerning young people's development and behaviour vary across cultures and context (Johnson, Powell & Yamamoto, 1997). At home, parents constitute important agents who reinforce appropriate behaviours and attitudes in subtle and not so subtle ways, but so are one's friends, school and teachers during adolescence. However, parents' role become crystallised in how they shape for instance adolescents' gender-related attributes, their interaction with children based on the sex of the child, the way they model their own gender identity, and communicate gender ideals and expectations (Epstein & Ward, 2011). Therefore, including parents in this study was crucial to provide us with evidence on how parents in Brunei would describe emotional and behavioural difficulties informed by cultural norms. Beside parents' influence at home, school is also a major source of cultural influence. It has been suggested that teachers are more sensitive than parents to the developmental

difficulties of young person with emotional and behavioural problems due to the demands placed upon students for attention, learning and self-control in schools (Miranda, 2008). On the other hand, parents are relied upon heavily by health services staff for spotting problems at home.

Hence, it is important to discern the extent to which parents, teachers and adolescents converge and diverge in their views about adolescents' emotional and behavioural difficulties. If the parents' view of what constitute EBD is different according to their responses to those of teachers when using the SDQ, it might highlight that adolescents' psychological difficulties are highly situational. Due to the expected norms among adults towards the youth population within Eastern culture that has shaped behaviours, it is essential to include parents, teachers and also adolescents themselves in reporting on emotional and behavioural problems as the adolescents may differ from the adults' view. Employing multiple informants reporting on the SDQ is valuable because psychological difficulties may be highly situational (Achenbach et al., 1987; Goodman et al., 2000).

In this present study, the cross-sectional design explored more than one case, measured at a single point in time and gauging variation to report patterns of association from a quantitative approach. According to Bryman (2012), the measurement adopted in this study is referred to as 'reverse operationalism', which leads to inductive theorising. In other words, the central framework of this study for conceptualising the properties of quantitative measures is known as psychometric theory (i.e. a theory that underlies a psychological measurement; a field that is concerned with the construction and validation of the measurement instrument, a central framework for conceptualising the properties of quantitative measures). This study had employed one of its statistical techniques called factor analysis (i.e. a statistical method used to describe variability among observed, correlated variables to determine whether groups of variables tend to bunch together to form distinct clusters referred to as factors). Following this initial method, to ensure the refinement of this theoretical approach, the central concepts of reliability and validity were employed, which in turn will provide us with good judgement of the criteria for evaluating quantitative methods.

The responses of parents, teachers and adolescents reported in this research will offer unique data on the views of emotional and behavioural difficulties in adolescents in Brunei allowing for evaluation of the usefulness of using this Western measures in Brunei. The research also applied a developmental approach in that it investigates the emotional and behavioural expectation from responses of parents, teachers and adolescents across two age groups and between male and female: younger adolescents (11-13 years old), and older adolescents (14-16 years old). These age groups were chosen based on what is known of age-related changes in emotional and behavioural difficulties across different culture (Crijinen, Achenbach & Verhulst, 1997; Cicchetti & Rogosch, 2002) (see Chapter Two). In selecting the starting age for participants, younger adolescents' literacy levels were considered. Eleven years was judged to be old enough to understand the questionnaire (Malay translation) and these YSR self-report was designed for age between 11-18 years old. At the secondary school level, the youngest group would be in year 7 (age 11-12 years) and the oldest group would be in year 10 (age 15-16 years; Year 11 the highest class level was not included in this study since students were preparing for their mock final exam for their BGCE 'O' Level examination). These two age groups provide the opportunity to examine differences in trends of emotional and behavioural difficulties among adolescents that could be useful in developing possible norms that reflect cultural expectations that represent Brunei as a Malay identity.

4.3 Sample

4.3.1 Sampling and Recruitment

A random sample of students (adolescents) was selected based on class and age of adolescents from the co-educational government secondary schools across Brunei. The process of recruiting the adolescents' sample initially involved approaching via email to the Head of Department of School, Ministry of Education, to request a list of secondary co-educational schools in Brunei and seek permission to randomly access some of these schools. On receiving a reply via letter (see appendix C), the researcher was informed that all schools in the provided list were notified of the permission for a researcher to approach schools for research purposes and to request their cooperation.

Certain key points were considered when deciding on the number of samples for this study, as suggested by Daniel (2011). This study reflected the need to provide descriptions of specific populations and evaluation of the emotional and behavioural problems among adolescents in Brunei. The target population for this study covers all students, aged between 11-16 years old, attending the co-educational secondary schools in Brunei. Exact numbers of students in all schools are not readily available and no prior estimate can be made since no study has been done in Brunei that examined a similar topic of interest. The homogenous nature of the population in this study therefore supports the targeted sample size. Since this is a probability sample design, using statistical formula is necessary in determining sample size. Using Cochran's equation (1962:75):

$$n_0 = \frac{Z^2 pq}{e^2} \qquad : \frac{(1.96^{2)}\,(0.5)\,(0.5)}{(0.05^2)}$$

the sample size (**n**) will be determined according to the following statistical conditions: the estimated proportion in the population using the most conservative estimate of 0.50 (p), with q value of 0.5 (1-p), a tolerable maximum error of 5% (**e**) and a confidence interval of 95% (**Z**= 1.96). Under all these conditions, the minimum sample required is 384 students. The final adjustment is necessary to take into account non-response rates by increasing the target sample size.

From the total of 34 schools provided in the list, 10 schools were randomly selected through multi-stage sampling and contacted. Only 1 school had to withdraw with due to administration commitments. For schools that agreed to participate in the research, initial visits to meet head teachers were arranged. These served several purposes. Firstly, to explain the requirements of a sample 80 students to be recruited in the schools simultaneously: from year 7 to year 10 (age group of 11 to 16 years). Secondly, to explain the procedure and arrangement of venue for gathering students together to answer the questionnaires: this included the use of consent forms, parents', teachers' and adolescent's measure i.e. the questionnaires (See appendix D-I). Thirdly, support from the schools was negotiated with the appointment of a core person from each school to assist with matters on actual day of data collection as well

as follow-up reminders to remind teachers about the return of parental questionnaires. Finally, the researcher was given permission to return to the schools on the agreed dates and time for data collection.

Each school was stratified by 4 strata across year 7 to year 10 (age group of 11-16). From each year level, 5 classes were randomly chosen and 4 students from each class were randomly sampled from the class registration. These name lists of random students were shared with the core person and all teachers in the respective classes were notified to release their students to join in answering the questionnaires on the stated date and time. When a student was absent on the actual day, the teacher would nominate any student at random on the contingency lists to take part. Overall, 720 adolescents were recruited from all 9 schools. Parents from these randomly selected students were also recruited.

Teachers of the respective classes were randomly chosen by schools (across different subjects taught) to provide feedback using the questionnaires on their student's emotional and behavioural development. Some schools were not able to identify 4 teachers to allocate to those 4 students per class and this led to a different ratio of teacher to student in rating the questionnaires. As determined by the respective schools, some teachers would only provide a report for one student, whereas other teachers would have to provide reports for 4 students. In total, 149 teachers were identified from all 9 schools and were expected to return a total of 720 reports about their students.

4.3.2 The Achieved Sample

Overall, 445 (62%) of 720 students obtained permission to participate in this study, along with the returned questionnaires from their parents as shown in table 4.1. However, because analysis in this study would only run data with completed information, any missing values deliberately left out by participants were completely removed from the database prior to analysis resulting in a 0% missing values. This resulted in 396 parents' responses for adolescents' report. Teacher responses were available for 329 adolescents. Finally, adolescent responses were only available for 282 adolescents' self-report (this will be explained further in the following results chapters).

Table 4.1 Adolescents' demographic details based on permission provided by parents (n-445)

Demographic information		Frequency	%
Gender	Male	216	48.5
	Female	229	51.5
Age	11-13	150	33.5
	14-16	285	63.6
Year Level	Year 7	85	19.1
	Year 8	117	26.3
	Year 9	120	27
	Year 10	123	27.6
Nationality	Bruneian	418	95.2
	Permanent residence	16	3.6
	Indonesia	1	0.2
	Others	4	0.9
Race	Malay	398	89.4
	Chinese	14	3.1
	India	3	0.7
	Others	30	6.7
Total		**445**	**100**

4.4 Data collection instruments (See appendix J-O)

As outlined in Chapter 1, there are three different groups of respondents presented in the thesis. All parents were invited to complete the Strength and Difficulties Questionnaires (SDQ). In addition, a small random selection of those parents (n=200) also obtained a second questionnaire, the parent version of the Child Behaviour Checklist (CBCL) in order to examine the concurrent validity of the two measures. Teachers were also invited to complete the Strength and Difficulties Questionnaires (SDQ). In addition, a small random selection of teachers (n=200) were also given a second questionnaire which was the teacher version of Teacher Report Form (TRF) in order to examine the concurrent validity of the two measures Adolescents were invited to complete the Youth Self Report (YSR). During the period of data collection, schools only allowed a single one-off period for gathering data from the students. This was in contrast to the parents' and the teachers' reports as they were allowed to respond in their free time within a given number of days. The adolescents' reports were carried out and submitted on the actual day of meeting with the students

4.5 Pilot Study

A pilot study was carried out in February 2013 using a convenience sample in a secondary school in Brunei. Upon receiving the consent from the Head of School, 76 participants (students) were randomly recruited by the researcher from the class registration list consisting of 4 students from each class across years 7, 8, 9 and 10 (age group of 11-17). 48 teachers were also randomly selected from the class list and they were randomly assigned to the selected students and asked to rate their students' emotional and behavioural development through the given questionnaires. Parents of selected students received sets of questionnaires sealed in envelopes and their responses through the consent form determined whether a child was or was not allowed to participate in this study. As advised by the head of school, a briefing session was scheduled for the students informing them about the purpose of this study and this approach resulted in quite a high return rate of questionnaires from the parents. During this briefing, students were forwarded the consent form for parents to allow their participation in the survey which were carried out on another day. A week later, only those whose parents had consented were allowed to participate in the survey. Students were requested to fill in their version of the questionnaires and they were also informed that without their parents' consent, their participation would be withdrawn and they had to leave the hall.

All parents (n= 76) and teachers (n=48) received their respective version of SDQ and only 19 received the parent version of CBCL (n=19) and the teacher version of TRF (n=19). All students (n= 76) received their version of YSR. From the above, 52 (68%) of 76 students obtained permission to participate in this study, along with the returned questionnaires from their parents. However, valid responses to explore the correlation between parents' and teachers' version of SDQ were only obtained from 43 (56%) of 76 students of the returned questionnaires from parents, teachers and students altogether.

The pilot study was conducted in a formal setting; students recruited were gathered at a specific time in the school hall with a teacher to assist the researcher, to ensure that the conditions were the same as those that the researcher would use later in the main study. The pilot study revealed that:

1) The information sheet and consent forms received from all participants were clear and acceptable.
2) The assessment measure was completed within one session of approximately 40 to 45 minutes, which was manageable. However, students had to sit on the floor and many were not comfortable with the setting.
3) Some of the terms used in the YSR were not entirely clear to the adolescents and were therefore rephrased several times. However, the originality of the terms used in YSR were not changed for the main study in order to ensure comparable results with related studies.

Overall, the result of the pilot study indicated a few changes to the administration of the test following this pilot. Importantly, the samples would need to be increased to more than 100 samples to ensure more comprehensive analysis and higher return rates. The hall or room used to cater students must be prepared with tables and chairs to ensure comfort for everyone. An assistant teacher would be required to assist the researcher in assisting students in the hall. Other than that, all procedures were kept the same during the main data collection.

4.6 Main collection procedure

The main study was carried out in September 2013, approximately 7 months after the pilot study was conducted. Initially, 10 schools were randomly selected. However, 1 school had to withdraw because they could not commit to administrating the questionnaire at the required time. All schools were approached and the Head of Teacher was briefed about the purpose of the study and a core person was appointed to assist the researcher on matters pertaining to the study. Prior to the data collection day, the researcher met with the core person appointed by schools to obtain the class registration list. From these available class lists, the researcher made the necessary random sampling and printed out 4 names of students from each class and in total, 20 names were prepared for each grade or year level. Overall, 80 names (including students on the contingency list i.e. 2 from each class) were shared with the core person of the schools and this information was disseminated to the class teachers of the respective classes with the information sheet and consent sheet for parents. During the meeting with the students on the actual day, they were briefed about the study and informed about the consent form and information sheet. Only those who returned their

parents' consent form during that day were allowed to participate. However, there were a few students who had forgotten to bring in their parents' consent form but verbally informed the researcher and the core teacher that their parents had consented for them to participate. Since each school only allowed a one-off meeting the core teacher suggested allowing them to participate to avoid disappointment. However, they were told that they would need to bring in evidence of their parents' consent forms or else their questionnaires would be automatically removed and destroyed. At the end of the session, all participating students received the parents' survey form of SDQ and 200 parents' forms throughout the study had additional questionnaire of CBCL attached to it. They were reminded to return their parents' survey forms and consent letter within 5 days and the selected teacher who participated in assessing the named students were responsible for collecting the questionnaires and returning them to the core person of the school. The researcher came a week after to collect all the returned questionnaires. Students who had initially forgotten to bring their parents consent form finally returned their parents survey and evidence of the consent and these students' surveys were then included.

4.7 Ethical Issues

The research was conducted with school-aged adolescents, parents and teachers with focus on adolescents' emotional and behavioural development. Therefore, the ethical process and an appropriate ethical framework were especially important. This research was guided by the British Education Research Association's (BERA), Ethical Guidelines for Educational Research (2011) and the British Psychological Society code of ethics and conduct (Ethics Committee of the British, 2009), that emphasised the four elements for ethical principles: respect, competence, responsibility and integrity. The consent for conducting the research was granted by the Research and Research Ethics Committee of the School of Education in Edinburgh University (see appendix P). In Brunei, a certificate of No Criminal Conviction and statements from the University were given to schools before the commencement of the study.

Information sheets were provided to all parents, teachers and adolescents about the study, such as how the data would be collected, the time it would take, the right of the participants to withdraw if they did not wish to continue, and how the data would be

used eventually. In accordance with strict ethical research guidelines, all the participants were guaranteed their anonymity, as codes would be used to identify them, as well as their information being treated with complete confidentiality. Consent forms forwarded to all participants informed them that all information they provided would be kept confidential and the data stored anonymously (see Appendices D-I for the letter and consent form). The consent form for parents asked parents to provide permission for their child to participate in this study. They were given a contact number to call if they had any concerns or queries following consenting their child to take part. Schools were then contacted again to arrange time to assess pupils at their school. At the beginning of the study, all participants were told that they were not obliged to participate in the study and they could drop out at any stage of the data collection.

4.8 Data analysis

The quantitative data gathered by the questionnaires were analysed using the SPSS for Mac 21 (SPSS Inc., 2013) with descriptive and inferential statistics. A Principal Component Analysis (PCA) was used to simply reduce correlated observed variables to a smaller set of important independent composite variables to explore the emergence of any trends in the response from parents, teachers and adolescents. PCA is the default method in many statistical applications like SPSS. Further analysis explored the correlations among (1) Item-Total correlation of scores which were assessed to see if any items had poor correlation that might affect the overall reliability results (2) scores derived from two different types of questionnaires but of similar construct of emotional and behavioural problems i.e. SDQ and Achenbach questionnaires; that could inform the validity construct between the two measures. The full details of the data analysis are provided in the Results chapter (5, 6 and 7).

4.9 Summary of Chapter 4

The chapter has set out the methodological approach taken for the research reported in this thesis. This research applied a cross-sectional approach. It included participation from school-aged adolescents at year 7 to 10 (age of 11-16 years old), parents and teachers of adolescents reporting on emotional and behavioural difficulties of adolescents. This chapter provided a broad view of the design of the study, key

consideration for sample size and recruitment, as well as approaches to data collection.

The methodology of using these three linked respondents is grounded in the original research studies reviewed in Chapter 3. The following three empirical chapters provide a more detailed account of the rationale for each element of the research, together with a detailed account of data analysis and findings. Chapter 5 reports and discusses parents' responses of adolescents' emotional and behavioural difficulties using the SDQ and evaluates the degree of usefulness in reporting the incidence rate of related problems identified by the SDQ. Chapter 6 reports and discusses teachers' responses on adolescents' emotional and behavioural difficulties using the SDQ and evaluates the degree of usefulness in reporting the incidence rate of related problems identified by the SDQ. Chapter 7 reports adolescents' responses on reporting their emotional and behavioural difficulties using the YSR and evaluates the degree of usefulness in reporting the incidence rate of related problems identified by the YSR. This study addresses the question of whether respondents in Brunei are similar to or vary in their description of emotional and behavioural difficulties compared to a similar group as Western respondents, and whether respondents identify differences in relation to age and gender when reporting emotional and behavioural difficulties of adolescents in Brunei. It also explores the likelihood of the norms and cut-off scores for describing emotional and behavioural difficulties in this particular culture (Brunei) remaining similar to or whether they vary from the original norms identified in the Western study.

4.10 Outline of Results Chapters

The results section is organised into three chapters. *Chapter Five* focuses on parents' report of SDQ and begins the analysis by addressing the first 3 research questions. Similarly, Chapter Six begins the analysis by addressing the next 3 research questions and finally Chapter Seven continues to address the final 3 research questions. The following section discusses the results of each question in turn. The lists of research questions are as follows:

1. What are the psychometric properties of the parents' report of SDQ when used in Brunei?
    a. What is the factor structure of parent reports' on the SDQ?
    b. What is the internal consistency of subscales of the parent reports' on the SDQ?
    c. What is the construct validity of the SDQ parents' reports?
2. Are there any age and gender differences in parents' scores on the SDQ?
3. What is the incidence rate of emotional and behavioural difficulties of adolescents according to parents' reports?
4. What are the psychometric properties of the teachers' report of SDQ when used in Brunei?
    a. What is the factor structure of teacher reports' on the SDQ?
    b. What is the internal consistency of subscales of the teacher reports' on the SDQ?
    c. What is the construct validity of the SDQ teacher' reports?
5. Are there any age and gender differences in teachers' scores on the SDQ?
6. What is the incidence rate of emotional and behavioural difficulties of adolescents according to teachers' reports?
7. What are the psychometric properties of the adolescents' report of YSR when used in Brunei?
    a. What is the factor structure of adolescents reports' on the YSR?
    b. What is the internal consistency of sub-scales of the adolescents reports' of the YSR
8. Are there any age and gender differences in adolescents' scores of SDQ?
9. What is the incidence rate of emotional and behavioural difficulties of adolescents according to adolescents' YSR?

CHAPTER 5
PARENTS' REPORTS OF EMOTIONAL AND BEHAVIOURAL DIFFICULTIES OF ADOLESCENTS IN BRUNEI USING THE SDQ

5.1 Introduction

This chapter presents the first exploratory study of emotional and behavioural difficulties among adolescents in Brunei using parent reports. It analyses data gathered using the Malay translated version of the Strength and Difficulties Questionnaires (SDQ). The literature reviewed in chapter 3 highlights the social acceptance using SDQ in reporting for both the strength and difficulties experienced by young people. Translated versions of SDQ as an assessment measure have also been widely evaluated through its report of psychometric properties and mixed findings were reported for support of its use across different cultures. Within this region, parents' reports of SDQ are only available from community samples of Thailand and Malaysia, and no finding is available yet from Brunei, a Malay country similar to Malaysia. Hence the gathered parental data from Brunei allows this analysis to inform researchers whether the emerged scales of difficulties and strength present any similarities or differences to the existing 5-factor subscales of SDQ. Moreover, the finding will provide further evidence on the efficacy of the SDQ as an assessment measure when used in Brunei.

Previous SDQ analysis revealed more support for its 5-factor structure when study samples came from Western compared to Eastern cultures. Available studies within the Asian region also produced a factor structure that varied from one country to another. For instance, the analysis of Asian parents' reports of SDQ items were seen to be less stable and lack consistencies in capturing distinct difficulties that could be shared across this region. Hence this lack of consistency highlights the possible role of culture in influencing parents' expectations of emotional and behavioural development within the societally acceptable norms. Generally, parents' ratings of SDQ revealed age and gender effect correspond well across different cultures, where adolescents' emotional and behavioural difficulties marked significant differences between girls and boys between the ages of 12-16 years with girls more likely to show internalising problems. On the other hand, boys were likely to show externalising

problems than girls. In some cultures, parents in Thailand and China are less tolerant of externalising behaviour among adolescents and (Weisz, Weiss & Suwanlert, 2006) this could result in increase likelihood of reporting those externalising problems. However, the reported rate of externalising problems by Thai children is still considered significantly lower compared to their American counterparts. Parents' view of how adolescents are expected to behave differ as a result of cultural values and norms which in turn influence the way parents have responded to the items of SDQ. More interestingly, this study will inform researchers whether Bruneian parents SDQ scores resemble closely to those of parents' reports of SDQ in the east or the west.

5.2 THE PRESENT STUDY

This study therefore investigated the parents' responses of reporting emotional and behavioural difficulties of adolescents in Brunei using the existing Malay translation of SDQ. It explored whether the Malay version of SDQ could be used effectively to represent the subscales describing difficulties and strength as measured by the existing 5-factor structures of SDQ. It also explored how much parents' responses agree (internal estimates) with the current subscales in representing the strength and difficulties as ascribed by the existing subscales of SDQ, and whether the subscales of SDQ corresponded well (concurrent validity) with related domains/subscales of another criterion measure. It then continued to explore parents' responses of the existing 5 subscales of SDQ to see whether there exist age and gender differences in their SDQ scores. Finally, it investigated the incidence rate of reported emotional and behavioural difficulties using the existing 5 subscales of SDQ.

Brunei is a Malay speaking country, similar to Malaysia but with different Malay dialects since Malaysia is a more ethically diverse population. Culturally, parents' expectation of adolescents' emotional and behavioural development may have been influenced by the presence of Malay traditions in both countries. Unfortunately, previous analysis of the Malay translation of SDQ conducted in Malaysia (Stokes, Mellor, Yeow & Hapidzal, 2013) did not provide evidence of the factor structure of the SDQ. Consequently, it was not possible to see the extent of how parents in both Malay countries correspond to one another in their responses of items grouped in the

SDQ. However, some evidence of poor reliability on the existing 5 factor subscales were reported. So it might be expected that Bruneian parents might also respond to some items of SDQ differently and that this might produce low internal reliability in the analysis. This low internal reliability was also reported for some subscales of SDQ from Thailand (Woerner, 2011) and China (Du, Kou & Coghill, 2008). Since Eastern collectivist culture is common within the Asian region it is therefore axiomatic that Brunei's culture would also fall into the collectivist dimension (Black, 2001). It has been found that parents' ratings are inconsistent with age effect when using the SDQ within the Asian region. While in Malaysia no age effect was reported on parents' score, in Thailand there was actually a decline with age over those SDQ difficulties scores, which is more consistent with some similar reports to the West. In contrast, gender effect on parents' scores across different culture was more consistent in several studies. Generally, parents tend to report higher for boys on conduct problems, hyperactive-inattentive problems, peer problems and total difficulties scores. In contrast to a Malay culture like Malaysia, parents' scores were not differentiated across those difficulties scales, except that parents commonly rated girls higher for emotional problems than boys. Hence, it is also possible that parents in Brunei might similarly report no age differences in adolescents EBD but might report more internalising problems among girls and more externalising problems among boys. Moreover, it was also found that the cut off scores for reporting SDQ range for normal, borderline and abnormal cases varied across different cultures. Therefore, it is also possible to expect that the Malay translation of SDQ might produce a different cut-off score than the original English version of SDQ.

Therefore, on the focus when investigating Bruneian parents' responses on items of SDQ is to explore whether items converge or diverge from the original version of SDQ, whether parents' scores differ according to age and/or gender of adolescents, and if Brunei's cut-off scores remain similar or have to be revised from the existing cut-off scores produced by Goodman (1997).

This chapter thus addresses the following three research questions:

1. What are the psychometric properties of the parents' report on SDQ when used in Brunei?
    a. What is the factor structure of parent reports' on the SDQ?

b. What is the internal consistency of subscales of the parent reports' on the SDQ?

c. What is the construct validity of the SDQ parents' reports?

2. Are there any age and gender differences in parents' scores on the SDQ?

3. What is the incidence rate of emotional and behavioural difficulties of adolescents according to parents' reports?

5.2.1 Participants

A total of 720 parents were randomly recruited from student registration year 7 to 10 (age 11 to 16 years olds) from 9 schools through multi-stage sampling (as described on section 4.3.1 on sampling and recruitment). From the above, completed questionnaires with permission to participate were obtained for 396 parent version of SDQ and 92 parent version of CBCL.

5.2.1.1 Gender differences in Parents reports

The majority of the parents who filled in the questionnaires were male (60%). The rationale for this analysis was to check if the researcher could combine data across respondents for subsequent analyses. There were no statistically significant differences between group means as determined by one-way ANOVA for all SDQ items of parents' reports. This is also evident in the Total Difficulties Score (TDS) of SDQ similarly supporting no evidence of statistically significant differences between male and female respondents of SDQ as determined by one-way ANOVA ($F(1,394) = 0.759$, $p=0.384$). Hence following the analysis section, parent respondents of SDQ were considered as one group representing parents' responses from Brunei.

Table 5.1 Gender differences in Parent SDQ for adolescents in Brunei

Item number	Item of SDQ	Means		Sig
		Male (n=239)	Female (n=157)	
1	considerate	1.5858	1.6497	0.252
2	restless	0.8828	0.8408	0.587
3	somatic	0.5481	0.6561	0.13
4	shares	1.2636	1.2803	0.81
5	temper	0.8075	0.9618	0.04
6	solitary	0.4895	0.586	0.181

7	obedient	0.523	0.5287	0.925
8	worries	0.5188	0.5605	0.545
9	Helpful if someone hurt	1.4268	1.5096	0.174
10	fidgety	0.41	0.3694	0.502
11	Has good friend	0.3013	0.293	0.886
12	fights	0.1548	0.2166	0.166
13	unhappy	0.2134	0.2803	0.188
14	generally liked	0.477	0.4522	0.663
15	easily distracted	0.6653	0.7197	0.434
16	nervous in new situation	0.5397	0.5159	0.702
17	kind to younger children	1.5146	1.5287	0.813
18	lies of cheats	0.2343	0.1656	0.12
19	picked or bullied	0.1841	0.2293	0.351
20	often volunteers	1.4603	1.5096	0.412
21	thinks before acting	0.5607	0.5478	0.833
22	steals	0.0251	0.0064	0.224
23	better with adults than with children	1.2092	1.2357	0.693
24	Many fears	0.5858	0.6051	0.678
25	Good attention	1.4142	0.586	0.997
	Total Difficulties score	9.9665	10.1439	0.384

5.3 Psychometric properties of parent reports' on the SDQ.

In this section, brief technical steps outlining the choices that were made in exploring the fundamental psychometric properties using the SPSS for Mac 21 (SPSS Inc., 2013) are described. An exploratory factor analysis was run to explore the relationships within group of observed variables, as measured through questions or items of the SDQ. This is followed by the report of internal reliability to see whether each subscale of SDQ actually reflected a level of consistency in the way parents were rating the intended subscales. The investigation was then focused on the construct validity report to check if the score of the subscale from the SDQ parent measure was correlated to the related criterion, in corresponding domain (subscale) of the Child Behaviour Checklist (CBCL) to evaluate if the SDQ actually measures what it claims to measure.

5.3.1 The psychometric properties of SDQ

5.3.1.1 Principal Component Analysis (PCA) of SDQ

Preliminary analysis of the responses at the item level was carried out to assess the pattern of responses and the rate of missing values in the data. Any missing values deliberately left by participants were completely removed from the database prior to analysis resulting in 0% missing values; this provided 396 completed parents' responses. This is a small sample, however this study aimed to explore the data, not to test hypothesis or theory, nor is it intended as a "validation" of instruments. Although the SDQ was hypothesised with the predicted 5-factor scales (emotional problems, conduct difficulties, hyperactive-inattentive problems, peer issues and prosocial skills) in the original study (Goodman, 2001), here it was used with the assumption that it had no prior hypothesis about factors or patterns of measured variables. This approach is used to explore what factor structure would emerge from Brunei parents' responses of SDQ when factor analysis is run. Hence, the Principal Component Analysis (PCA) serves the purpose of identifying the underlying relationships between measure variables of SDQ. The Principal Component Analysis (by default in SPSS) was used as an extraction method that follows closely the approach applied in related studies. Applying PCA is recommended as the first step to extract maximum variance from a large data set to produce smaller number of components (Tabachnick & Fidell, 2007). A varimax rotation was adopted to maximise the orthogonality, interpretability, simplification and the variance of factors, where the factors remained uncorrelated (Khan, 2006). Hence, it is also recommended that the varimax rotation technique is used as a first step in exploring the data set (Yong, 2013) to evaluate how much support there is for items that remain uncorrelated. The results below will determine how much support the data has for Principal Component Analysis (PCA) with the varimax rotation.

The correlation matrix output (table 5.2) below indicates that low correlation ($r < +/- 0.30$) present a lack of patterned relationships. However, correlation between positive items and negative items are expected to have very low and in some cases negative correlation coefficient. For instance positive item 1 (considerate) with negative item 2 (restless) only correlated at 0.009. As a follow up, the determinant score was above the rule of thumb of 0.00001 (.011) and overall indicating that the correlation matrix did not have any high correlation that are above r=+/-.09 which

would otherwise indicate that the data may have a problem of multicollinearity (i.e. the Squared Multiple Correlation close to 1.0).

Table 5.2 Parent SDQ correlation matrix for some variables

Correlation	SDQ items					
	considerate	restless	somatic	shares	temper	solitary
considerate	1.000	.009	.007	.220	-.046	-.031
restless	.009	1.000	.162	.052	.258	.139
somatic	.007	.162	1.000	-.056	.228	.153
shares	.220	.052	-.056	1.000	.026	.019
temper	-.046	.258	.228	.026	1.000	.254
solitary	-.031	.139	.153	.019	.254	1.000
obedient	.289	-.016	-.044	.201	-.150	-.057
worries	-.032	.314	.299	.004	.222	.254
Helpful if someone hurt	.330	.030	.009	.184	-.042	-.098
fidgety	-.082	.240	.210	.038	.221	.182
Has good friend	.127	.086	.064	.074	.047	-.005
fights	-.176	.206	.160	.033	.258	.063
unhappy	-.095	.148	.214	-.066	.284	.277
generally liked	.271	-.047	-.110	.293	-.083	-.100

Note: Truncated sample of variables. The Determinant score is 0.011.

The *Bartlett's Test of Sphericity* (significant level of p< .05) confirms that the SDQ measure of parents' report had some support for patterned relationships amongst the variables (p<.001). Following this, the result of the Kaiser-Meyer-Olkin Measure (KMO) of Sampling Adequacy (0.813 i.e. cut-off above .05) and the diagonal element of the Anti-Correlation matrix that has the 'a' superscript (see table 5.3; cut-off of above .05), indicated that generally the SDQ test was suitable for Principal Component Analysis (PCA).

Table 5.3 Parent SDQ Anti-image correlation matrix

Anti-image Correlation	SDQ items					
	considerate	restless	somatic	shares	temper	solitary
considerate	.847[a]	-.044	-.065	-.117	-.024	-.019
restless	-.044	.810[a]	-.012	-.025	-.133	-.018
somatic	-.065	-.012	.819[a]	.046	-.097	-.024
shares	-.117	-.025	.046	.751[a]	-.043	-.065
temper	-.024	-.133	-.097	-.043	.865[a]	-.146
solitary	-.019	-.018	-.024	-.065	-.146	.798[a]

Note: Truncated sample of variables. The Anti-Image covariance is not shown.

In determining the number of factors, 3 steps were explored in the analysis. Firstly, the *Total Variance Explained table* (see table 5.4) indicates that Eigenvalues and variance after rotation produced 6 factors. Additionally, the averaged extracted communalities (table 5.5) is greater than .05 and the sample size is above 250. Hence, the reported Kaiser Criterion is said to be reliable. Secondly,, the scree plot (figure 5.1) consisting of eigenvalues and data points above the break (i.e. point of inflexion) were considered valid factors. Considering that our parents' responses include more than 200 participants, using this scree test was deemed valid and a horizontal line and a vertical line starting from each end of the curve were drawn. Drawing from both the Eigen values and scree test, the SDQ in this study confirmed the emergence of 6 factors. The final step using the program called Monte Carlo PCA for Parallel Analysis would generate random results of Eigenvalues which will be compared against the first Eigenvalues produced from table 5.4 Based on the assumption that if the first Eigenvalue is larger than the criterion value from parallel analysis, the factor will be retained (or accepted). As a result, only three (3) factors were accepted (see table 5.6. However, for the purpose of this analysis, both suggested factors (6 and 3 factors) will be analysed closely to understand which factor structure would offer the best representation for the SDQ.

Table 5.4 Parent SDQ Total Variance Explained for extracted factors

	Initial Eigenvalues		Extraction Sums of Squared Loadings		Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Total	% of Variance	Total	% of Variance	Cumulative %
1	4.227	16.907	4.227	16.907	3.434	13.737	13.737
2	2.946	11.782	2.946	11.782	2.322	9.289	23.026
3	1.373	5.491	1.373	5.491	2.085	8.338	31.364
4	1.134	4.536	1.134	4.536	1.424	5.697	37.061
5	1.074	4.295	1.074	4.295	1.329	5.315	42.376
6	1.004	4.017	1.004	4.017	1.163	4.651	47.027
7	.992	3.967					
8	.973	3.891					
9	.936	3.744					

Table 5.5 Parent SDQ Items Communalities

Item of SDQ	Initial	Extraction
considerate	1.000	.404
restless	1.000	.357
somatic	1.000	.374
shares	1.000	.410
temper	1.000	.385
solitary	1.000	.452
obedient	1.000	.377
worries	1.000	.507
Helpful if someone hurt	1.000	.481
fidgety	1.000	.433
Has good friend	1.000	.557
fights	1.000	.553
unhappy	1.000	.494
generally liked	1.000	.531
easily distracted	1.000	.534
nervous in new situation	1.000	.559
kind to younger children	1.000	.518
lies of cheats	1.000	.430
picked or bullied	1.000	.461

often volunteers	1.000	.513
thinks before acting	1.000	.458
steals	1.000	.460
better with adults than with children	1.000	.611
many fears	1.000	.483
Good attention	1.000	.414

Figure 5.1 Scree plot illustrating the six factors

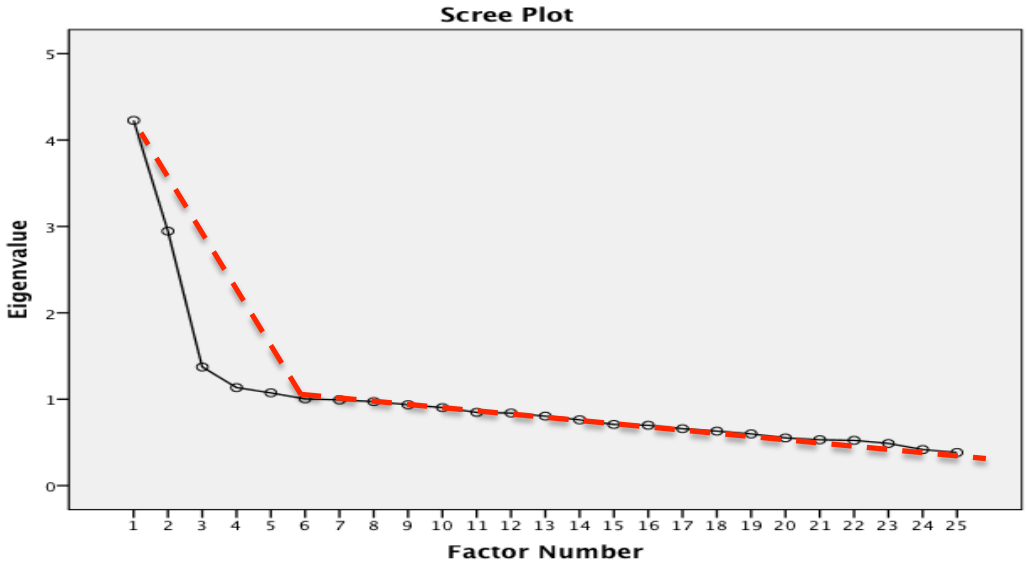


Table 5.6 Comparison of eigenvalues from PCA and criterion values from parallel analysis

Component number	Actual eigenvalue from PCA	Criterion value from parallel analysis	Decision
1	4.227	1.498	Accept
2	2.946	1.4102	Accept
3	1.373	1.3559	Accept
4	1.134	1.3037	Reject
5	1.074	1.2575	Reject

Varimax rotation produced a Rotated Component Matrix (table 5.7) where suppressing small coefficient helps with the interpretation. The factor loadings show that the factors were valid with at least 3 variables per factors that are above .32. The Factor Plot (not shown) produced using SPSS was not useful for interpretation in this study when there are more than 3 factors identified. The rotation technique produced

the Component Transformation Matrix (table 5.8) and the result indicated that it did not produce a symmetrical off-diagonal element for this case when using the varimax (orthogonal) rotation technique. This presents a perception that the analysis of the SDQ factors may be correlated. Hence a rotation using the promax (oblique) that allows factors to correlate was analysed next. However, when the SDQ was rotated using the promax technique, the Pattern Matrix produced factor loading that was almost identical to that loading produced by Rotated Component Matrix of varimax rotation (see table 5.7). However, with promax rotation, several higher loadings were presented for the first 3 factors compared to loadings with varimax rotation, and additional items loaded on factor 3 and 4 with promax rotation were visible. Hence the loadings of Pattern Matrix was chosen and simplified for visual purpose in describing how items of SDQ converge or diverge with the existing 5-factor structures of SDQ. This is shown in table 5.9 below.

Table 5.7 SDQ parental component Matrix

a) Rotated Component Matrix[a]

Items of SDQ	Component					
	1	2	3	4	5	6
help out	.707					
caring	.653					
popular	.646			.261		
kind	.621					.334
considerate	.587					
obeys	.577					
attends	.568					
reflect	.476		-.262	-.396		
shares	.467			.414		
unhappy		.672				
loner		.645				
worries		.547	.285		.342	
somatic		.536			.261	
afraid		.502	.465			
tantrum		.494				.282
fidgety		.398		.319	.381	
clingy			.702			

distract			.653		.207	
bullied			.613			-.201
steals				.661		
lies	-.222		.398	.437		
friend					.718	
restless		.260	.326		.422	
old best	.259			-.241		.688
fights	-.247			.246	.349	.533

b) Pattern Matrix[a]

Items of SDQ	Component					
	1	2	3	4	5	6
help out	.734					
caring	.681					
popular	.668			.326		
kind	.636					.334
considerate	.598					
obeys	.576					
attends	.544					
shares	.532			.462		
reflect	.422		-.221	-.370		
loner		.722			-.231	
unhappy		.704				
somatic		.527			.254	
worries		.473			.307	
tantrum		.465				.266
clingy			.764			
bullied			.695		-.218	
distract			.689			
afraid		.430	.450			
steals				.731		
plies			.346	.401		
friend					.811	
restless			.252		.401	
fidgety		.334		.298	.352	
old best	.207			-.303		.747
fights	-.247				.316	.492

Table 5.8 SDQ Factor Transformation Matrix of Parent reports

Component	1	2	3	4	5	6
1	-.649	.511	.487	.209	.184	.053
2	.742	.427	.349	.134	.297	.198
3	.063	-.515	.335	.774	-.080	-.118
4	-.154	-.227	-.313	.162	.524	.725
5	.026	.489	-.598	.551	-.314	.004
6	.010	-.015	.269	-.102	-.706	.646

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization

Table 5.9 SDQ 6-factor Analyses

Parent SDQ: School Sample of 398 School Children, Aged 11-16						
	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**	**Factor 6**
Total variance explained	13.7	9.3	8.3	5.6	5.3	4.7
Factor loadings						
Prosocial						
1 considerate	**0.598**					
4 shares	**0.532**			0.414		
9 caring	**0.681**					
17 kind	**0.636**					
20 helps out	**0.734**					
Emotional						
3 somatic		**0.527**				
8 worries		**0.473**				
13 unhappy		**0.704**				
16 clingy			**0.764**			
24fears		0.430	**0.450**			
Peers						
6 solitary		**0.722**				
11 good friend*					**0.811**	
14 popular*	**0.668**					
19 bullied			**0.695**			
23 better with adults than children						**0.747**
Hyperactivity-Inattentive						
2 restless					**0.401**	
10 fidgets					**0.352**	
15 distractible			**0.689**			
21 reflective*	**0.422**			-0.375		

25 attentive*	**0.544**					
Conduct						
5 tempers		**0.465**				
7 obedient*	**0.579**					0.282
12 fights	-0.247				**0.316**	**0.492**
18 lies			0.346	**0.401**		
22 steals				**0.731**		

Notes: *Reversed items. Only factor loadings > .30 are shown. Principal Component Analysis with Promax rotation presented according to the predicted 5 subscales of SDQ to illustrate how items converge and diverge from this original version of SDQ-item loadings.

The factor structure of parent reports of the Malay translation version of SDQ (refer table 5.9) produced a 6-factor structure (an additional extra 1-factor structure compared to the English version of SDQ). There were also differences in factor loadings leading to an overall structure that was different from that reported based on British parents (Goodman, 2001). The only factor that seemed to converge well in representing the strength of SDQ were the 5 predicted items with positive traits that loaded convincingly on factor 1 labelled as prosocial behaviour. However, with this prosocial factor, an additional 4 reversed items had more positive responses from parents (see table 5.10) in Brunei and failed to emerge onto the respective difficulties subscales of SDQ. Such reverse items were item 14 (popular) of peer problems, item 21 (reflective) and 25 (attentive) of Hyperactivity-Inattentive problems and item 7 (obedient) of conduct problems, these loaded positively onto the prosocial factor 1 with more than 90% of parents rated 'certainly true' and somewhat 'true' for these items. The 5 emotional items of SDQ diverged into 2 separate emotional related factors. For instance, only three emotional items (somatic, worries and unhappy) loaded together onto factor-2 subscale. Instead two additional items (5 and 6) with one each from conduct problem (tempers) and peer problem (solitary) loaded together in this factor 2 subscale describing more of emotionally-distressed problems. The remaining 2 other emotional items of SDQ (clingy and fears) loaded separately on factor-3 subscale. In addition,, joining this factor were item 19 (bullied) of peer problem and item 15 (distracted) of hyperactive-inattentive problem, which suggests a possible description of emotionally-dependent difficulties. Factor 4 only has 2 items (lies and steals) of conduct problems loading together, which suggests they are best described as dishonest behaviour. The 2 hyperactive items (restless and fidgets) have diverted away from the hyperactive-inattentive subscales of SDQ onto the newly

emerged factor 5. Loading together on this factor was a reverse item 11 (has one good friend) that failed to emerge onto the peer difficulty scale. Instead factor 5 is seen slightly positive describing adolescents who are hyperactive-friendly. The final factor (6) had a mixed and unstable (only 2 items) dimension structure. Parents seemed to recognise item 23 (better with adults than with children) as a positive trait instead of peer problems. More than 80% of parents rated 'true' and 'somewhat true' for this item. One negative item (fights) of conduct problem loaded together on this factor.

Table 5.10 Percentage of reverse items with evidence of more positive responses

SDQ items	Ratings of parents		
	Not true (%)	Somewhat true (%)	Certainly true (%)
Obedient	**4.5**	**43.4**	**52.0**
Popular	**2.8**	**41.2**	**56.1**
Attends	**4.5**	**49.5**	**46.0**
reflective	**5.3**	**44.9**	**49.7**

Although 6 factors emerged from Brunei parents' responses of SDQ, factor 4 and 6 did not have sufficient items loadings on the factor subscales and are generally considered weak and unstable dimensions of structure (Costello & Osbourne, 2005).

Table 5.11 **SDQ 3-factor Analyses**

	Factor 1	**Factor 2**	**Factor 3**
Total variance explained	13.7	9.3	8.3
Factor loadings **Prosocial**			
1 considerate	**0.570**		
4 shares	**0.479**		
9 caring	**0.637**		
17 kind	**0.650**		
20 helps out	**0.687**		
Emotional			
3 somatic		**0.568**	
8 worries		**0.650**	
13 unhappy		**0.579**	
16 clingy		**0.444**	
24fears		0.590	
Peers			
6 solitary		**0.487**	
11 good friend*	**0.261**		

14 popular*	**0.661**		
19 bullied			**0.399**
23 better with adults than children	**0.319**		
Hyperactivity-Inattentive			
2 restless		**0.488**	
10 fidgets		**0.455**	
15 distractible			**0.515**
21 reflective*	0.462		**-0.492**
25 attentive*	**0.562**		
Conduct			
5 tempers		**0.545**	
7 obedient*	**0.585**		
12 fights		**0.333**	
18 lies			**0.584**
22 steals			**0.514**

A closer examination of the 3-factor structure on the Malay translation version of the SDQ (refer table 5.11), provided a slight better visual representation of the overall structure of the SDQ. Having said that, there were also differences in several factor loadings leading to an overall structure that was different from the reported broad construct of internalising (grouping emotional and peer problems) and externalising problems (grouping conduct problems and hyperactive-inattentive problems) as proposed by Goodman (2001). Factor 1 continues to represent positive elements on the SDQ which could be labelled as prosocial behaviour. The 5 emotional items provided a clear loading of emotional problems however, this did not group well with items from the peer problem scale to name the label as 'internalising problems scale'. On the other hand, the remaining items of hyperactive-inattentive problem and the conduct problem scale had several items loading across all 3 factor structures. These items could not be considered the group labelled as 'externalising problems scale'.

Overall, parents' responses of the Malay translation of SDQ produced different factor scales than those that emerged of the original English version of SDQ. Since at this stage the study serves as an exploratory purpose, not hypothesising nor theory testing, both the 6-factor structures and the 3-factor structures that were found in this study could not be confirmed yet. Hence the following analysis will continue to evaluate the original 5-factor structures of SDQ. Doing so will provide some insights into how

reliable and valid is SDQ is if parents in Brunei continue to report emotional and behavioural difficulties of adolescents using the existing 5-factor structure proposed by Goodman (1997).

5.3.1.2. Internal consistency of parental report SDQ subscales

Internal reliability for the 5 factor subscales (prosocial, emotional problems, hyperactivity-inattentive problems, peer issues and conduct problems) were examined to see whether parents in Brunei would show low or high agreement in their ratings of items expected to describe the 5 subscales of SDQ. Since the earlier section indicated some variation in the pattern of the Malay translation of SDQ from the original version of SDQ, we would anticipate some low internal reliability to appear from responses provided by parents. George and Mallery (2003) provided the following rules of thumb: " > 0.9 - Excellent, > 0.8 - Good, > 0.7 - Acceptable, > 0.6 - Questionable, > 0.5 - Poor, and < 0.5 - Unacceptable" (p. 231). Similarly, Cicchetti (1994) proposed that a Cronbach's alpha of 0.7 is considered desirable for reporting internal consistency.

Overall, Cronbach's alpha (table 5.12) reveals parents' ratings for all items pertaining to difficulties (total difficulties score) had good internal consistency (0.7). The factor scales of parents' report were further confirmed through the report of internal consistency. The way parents' responds to items on the prosocial subscale and to some degree emotional subscale were internally consistent with acceptable Cronbach's alpha >0.6. Parents' responses to all items measuring hyperactive-inattentive problem was of reasonably acceptable consistency (Cronbach's alpha >.0.5). Internal reliability estimates highlighted that removal of any items of Prosocial, Emotional and Hyperactivity-inattentive problems would not increase their Cronbach's alpha. Items assessing conduct problems produced low internal estimates and removing item 22 (steals) only improved the overall consistency slightly. Items of peer problems produced poor internal estimates (0.079) and omitting item 23 (gets on better with adults than children) retained the poor internal consistency.

Table 5.12 Cronbach's alpha coefficients and means (standard deviations) of the parent SDQ subscales

SDQ Scales for Parent	Cronbach's alpha	Means and Standard Deviations	Items whose omission improve alpha	Cronbach's alpha after omission
Total difficulties	0.744	10.13 (4.93)	Gets on better with adults then children (Item 23)	0.761
Emotional	0.650	2.52 (2.07)		
Conduct	0.420	1.80 (1.38)	Steals from home, school or elsewhere (Item 22)	0.430
Hyperactive	0.521	3.09 (1.88)		
Peer	0.085	2.72 (1.37)	Gets on better with adults than children (Item 23)	0.215
Prosocial	0.653	7.34 (1.93)		

However, it is important to note that the SDQ subscales only have five items each and this small number of questions with poor interrelatedness between items may have led to the lower reading for Cronbach's alpha. Although the SDQ scores were not normally distributed, analysis using both Pearson and Spearman (see table 5.13) produced almost similar correlation results of the Item-Total correlations. Pearson product moment correlation for seven items (three from conduct problems and four from the peer problem) reported correlations of less than 0.4 (poor) with the item-total score. On the other hand, table 5.14 reveals Item-Total correlations for items with correlation value above 0.4.

Table 5.13 Pearson's correlation and Spearman's correlations: Items with item-total correlation of less than 0.4 (i.e. considered as poor)

Item of SDQ	Correlation	
	Pearson correlation (sig)	Spearman correlation (sig)
fights	0.396** 0.000	0.370** 0.000
bullied	0.378** 0.000	0.382** 0.000
steals	0.165** 0.001	0.152** 0.002

Old best	0.102* 0.042	0.085 0.093
obey	0.347** 0.000	0.373** 0.000
friend	0.059 0.241	0.089 0.077
popular	0328** 0.000	0.335** 0.000

*** Correlation is significant at the .0.001 level (2 tailed)
** Correlation is significant at the .0.01 level (2 tailed)
*Correlation is significant at the 0.05 level (2 tailed)

Table 5.14 Item-Total correlations with subscales totals with only correlation value above 0.4 shown.

Item of SDQ	Correlation	
	Pearson correlation (Sig)	Spearman correlation (sig)
restless	0.483***	0.507***
Somatic	0.451***	0.453***
Temper	0.535***	0.534***
Worries	0.566***	0.553***
Fidgets	0.485***	0.480***
unhappy	0.507***	0.501***
distracted	0.535***	0.537***
Clingy	0.557***	0.540***
lies	0.460***	0.448***
afraid	0.550***	0.549***

Overall, the 5-factor scales of SDQ provided acceptable reliable consistency in representing problems associated with emotional problems, hyperactive-inattentive problems, prosocial behaviours and the Total Difficulties Score (TDS). The next analysis evaluates how valid the SDQ is if parents' responses are examined in relation to the existing 5-factor structure as proposed by Goodman (1997).

5.3.1.3 Construct validity of the SDQ parents report.

Construct validity (criterion-related) was carried out to check if the scores of the subscales from the SDQ parents measure are correlated to a related criterion, in corresponding domains (subscales) of the Child Behaviour Checklist (CBCL). Hence this approach informs us the degree to which parents' reports of SDQ subscales

actually measures what it claims to measure. Since earlier analysis indicated poor factor structure combined with only reasonably acceptable internal reliabilities for some of the factor subscales, it is expected to find some low validity to appear from responses provided by parents.

A sub-sample of 92 parents reports were available to evaluate construct validity test. The Pearson Product Moment correlation (table 5.15) examined the associations between the total scores and the corresponding domains of difficulties subscales of the SDQ and CBCL It was reported to be significant at $p \leq 0.05$ for all corresponding domains. Overall, the way parents rated the total difficulties score of SDQ corresponded only fairly well to the CBCL. Among all the SDQ subscales measuring difficulties, the emotional symptoms exhibited a moderate equivalence to CBCL internalising problems. In particular, this was seen as a result of SDQ emotional items that matched well with the way parents rated the withdrawn problems of CBCL rather than those items assessing the somatic problems and anxious-depressed symptoms of the CBCL. The next SDQ subscale is hyperactive-inattentive problems, which corresponded acceptably with the way parents rated the attention problems of CBCL. Again fairly comparable scores revealed that the way parents rated conduct problems of SDQ resembled fairly well with items assessing aggression from the CBCL rather than those items assessing delinquent problems of CBCL. Finally, parents rating of peer problems of SDQ could not be validated with the social problems of CBCL

Table 5.15 Correlations between parent reports on the SDQ and the CBCL

Scores	Parent-report
	SDQ/CBCL n=92
Total/Total	0.575**
Conduct problems/Externalising	0.522**
Conduct problems/Delinquent	0.416**
Conduct problems/Aggressive	0.525**
Hyperactivity/Attention problems	0.564**
Emotional symptoms/Internalising	0.525**
Emotional symptoms/Withdrawn	0.539**
Emotional symptoms/Somatic problems	0.387**
Emotional symptoms/Anxious-depressed	0.416**
Peer problems/Social problems	0.323**

Overall, only 3 (Emotional problems, Hyperactive-inattentive problems and Conduct problems) factor subscales of SDQ including the Total Difficulties Score (TDS) represented moderate validity support in measuring what it claims to measure.

5.3.2 Findings of psychometric properties of the parent report SDQ

Three basic tests were carried out to evaluate the way parents in Brunei viewed of emotional and behavioural difficulties using the Strength and Difficulties Questionnaires (SDQ). The overview of the factor structure of the SDQ indicated that the Principal Component Analysis (PCA) tapped into 6- factor subscales that differed from the original existing 5-factor scale of SDQ. Although a 6-factor scale was produced, 2 factors were reported to have insufficient items loadings on the factor subscale and would be considered weak and unstable dimensions of the structure. From the newly emerged factor structure, only the prosocial subscale had acceptable loadings for all items that merged together. Parents seemed to view emotional problems of SDQ as separate factors with one as emotionally distressed and the other factor as emotionally-dependent. Moreover, parents seemed to recognise hyperactive items (restless and fidgets) to be representative of those who were surrounded with good friends. The remaining items of the problem scales provided poor fit with loadings dispersed across other factors for the predicted factor scale of hyperactive-inattentive, peer problems and conduct problems. The overall poor fit of these subscales were mainly caused by the reverse items (*reflective, attentive, obedient* and *popular)* that failed to tap any negative traits and instead loaded on the positive factor of prosocial behaviour.

Following the evaluation of the existing SDQ 5-factor structures, only the prosocial, emotional problems, hyperactive-inattentive problems subscales including the Total Difficulties Score (TDS) provided support for good to moderate internal consistencies (Cronbach's alpha >0.6) reflecting an acceptable reliability measure for those subscales only. Conduct problems and peer problems provided low support for item inter-relatedness (low internal consistencies). This low reliability factor was evident in the Pearson product moment correlation where three items from conduct problems and four items from peer problems reported poor (<0.4) correlations with item-total

score. Across the 4 difficulties scales, the final analysis reported that the SDQ Malay translation had moderate validity support for only a 3 factor scale of SDQ. Moderate equivalence to CBCL was evidenced for emotional symptoms (SDQ) with internalising problems of withdrawn problems (CBCL), hyperactive problems (SDQ) with attention problems (CBCL) and conduct problem (SDQ) with externalising problems of aggression problems (CBCL). Parents' rating of peer problem of SDQ had poor validation with the social problems of CBCL. The overall result showed that the Malay translation of SDQ provided a different impression of parents' responses in describing difficulties in comparison with the existing 5-factor structures of SDQ. Overall, the 5-factor structures of SDQ, parents' responses could only provide moderate representation for reliability and validity in representing emotional problems, hyperactive-inattentive problems and conduct problems.

A further interpretation of this finding will be presented in the Discussion section of this chapter. Following this section the results for Research Question 2 will be addressed. To reiterate, since this is only an exploratory study of SDQ the original 5 factors (prosocial, emotional, hyperactive-inattentive, conduct and peer problems) were retained in this study to explore further whether gender and age differences exist in parents' responses when reporting adolescents' emotional and behavioural difficulties using the SDQ. Next section will report this further.

5.4 Age and gender effect of Parent SDQ

In this section, parents' score of the SDQ were analysed to see if there were any age and gender differences in their responses. Before testing for gender and age differences of the respective subscales of SDQ, several basic tests were carried out to assess the appropriateness of using parametric statistics.

Since this data set was small (samples $\leq$2000), the Shapiro-Wilk test was used instead of the Kolmogorov-Smirnov test. The Shapiro-Wilk test revealed that the score for each subscale was not normally distributed with $p \leq 0.05$. A non-parametric test of Mann-Whitney was therefore used to explore for any gender and age differences in the scores of the 5 subscales of SDQ.

5.4.1 Age differences in emotional and behavioural difficulties as reported by parent SDQ

The mean scores of parents ratings is presented in table 5.16 with the entire sample and compares scale means of the original subscales for two age groups i.e. Age range of 11-13 to 15-16 years old. The reports revealed that for all subscales there were no significant differences in the way parents reported for each of the subscales. The effect size (Cohen *d)* of age effects was also considered very small (or negligible) for all parent-rated scores of SDQ subscales. Hence there were no differences between the two age groups in parents' responses to the SDQ.

Table 5.16 Scale means of Parent SDQ with age group (n=396)

	Total sample Mean	Age 11-13 N=139 Mean (SD)	Age 14-16 N=257 Mean (SD)	Effect size *d*
Total difficulties score	10.1	10.4 (4.94)	10.0 (5.04)	0.08
Emotional symptoms	2.52	2.42 (2.03)	2.57 (2.10)	0.07
Conduct problems	1.80	1.84 (1.23)	1.77 (1.45)	0.05
Hyperactivity-Inattentive	3.09	3.27 (1.89)	2.98 (1.88)	0.15
Peer problems	2.71	2.76 (1.33)	2.69 (1.39)	0.05
Prosocial behaviour	7.34	7.40 (2.03)	7.31 (1.88)	0.05

Not significant (Mann-Whitney U-tests). Cohen's effect size (d):0.20= small, 0.50= moderate, 0.80= large.

5.4.2 Gender differences in emotional and behavioural difficulties based on the parents' SDQ reports.

The mean scores obtained for parents' ratings in the entire sample are presented in table 5.17, which also reports and compares scale means for male and female. Girls received significantly higher scores than boys on the subscales assessing emotional symptoms and conduct problems. Gender effects on these subscales combined to yield a significantly higher total difficulties score for female adolescents. The effect sizes *(d)* of gender differences of parents' ratings on total difficulties score, emotional problems and hyperactive-inattentive subscales scores were small (0.29-0.41). Parents' ratings of their children's hyperactive-inattentive, peer problems and prosocial behaviour did not reveal substantial sex differences. However, at item level,

a Mann-Whitney test was carried out to explore which items were seen more distinctive between males and females when rated by parents. Only 2 difficulties scales and the total difficulties score provided significant differences in rating of items. For instance, in emotional scale, females are rated higher for having somatic problems, being worried, feeling unhappy and afraid. With conduct problems, females were also rated higher for showing temper and being disobedient.

Table 5.17 Gender differences in adolescent SDQ according to parent SDQ ratings

	Total sample Mean	Male Mean (SD)	Female Mean (SD)	Effect size *d*	Mann-Whitney U-test Sig (mean)
Total difficulties score	10.1	9.36 (4.43)	10.8 (5.37)	0.29**	Females are more somatic (0.72)***, tantrum (1.00)***, unhappy (0.33)***, afraid (0.69)** and disobedient (0.59)**
Emotional symptoms	2.52	2.09 (1.89)	2.91 (2.15)	0.41***	Females are more somatic (0.72)***, worries (0.61)*, unhappy (0.33)*** and fears (0.69)**
Conduct problems	1.80	1.53 (1.22)	2.0 (1.48)	0.37***	Females are more temper (1.00)*** and disobedient (0.59)**
Hyperactivity-Inattentive	3.09	3.10 (1.85)	3.08 (1.92)	0.01	
Peer problems	2.71	2.64 (1.28)	2.78 (1.45)	0.10	
Prosocial	7.34	7.38	7.31	0.04	

behaviour		(1.91)	(1.95)		

***p≤0.001; **p≤0.01; NS not significant (Mann-Whitney U-tests). Cohen's effect size (d):0.20= small, 0.50= moderate, 0.80= large.

Both tables (5.16 and 5.17) reveal that overall parents' ratings were highest for hyperactive-inattentive problems followed by peer problems. Among all the difficulty subscales, the lowest report was evident from parents' report of conduct problems. A further interpretation of these findings will be discussed later in this section. The overall results highlighted the presence of gender effect on some of the SDQ subscales, which will be considered in the next section for reporting the incidence rate of adolescent emotional and behavioural difficulties using the SDQ.

5.5 Incidence rate of EBD of adolescents using parents SDQ reports

Since gender effects were observed for some of the subscales and the total difficulties score, a threshold based on the entire samples were thought to be insufficient. While the distributions of the five subscale scores were determined separately for two different subgroups of comparable ages (11-13 years, 14-15 years), it did not reveal sufficient deviations to provide age-specific bandings and instead such stratified bandings could be provided for the total difficulties scores. Hence, the gender-specific bandings were analysed and it is only meaningful to report the actual incidence rate of emotional and behavioural difficulties in Brunei using new norm cut-off points, and such adjustment will reflect closely the characteristic of the sample of study. Reporting for incidence of emotional and behavioural difficulties was carried out using the cut-off scores defining the range of emotional and behavioural difficulties as normal, borderline and abnormal. The exact placement of cut-offs was guided by score distributions following closely the suggestion made by Goodman (1997) in his original study. All subscales defining abnormal scores are those that fall within the 90th percentile of the scores, borderline would be scores that range between 80th to 90th percentile and normal group are based on any scores that fall below the 80th percentiles. However, since this study only has 398 parents reports which contributed to a limited number of discrete scores (for example see table 5.18), using the calculated percentiles the targeted percentages could only be approximated closely to at least 10% of the population expected to fall into the abnormal category, 10% in the

borderline range and 80% of the population is within the normal category (following suggestion by Goodman, 1997).

Table 5.18 Parents' reports of conduct problems displayed by gender.

Score of SDQ Item (conduct problem)	Male		Female	
	Percentage	Cumulative percent	Percentage	Cumulative percent
0	21.4	21.4	14.8	14.8
1	33.2	54.5	27.3	42.1
2	25.1	**79.7**[(a)]	21.5	63.6
3	**12.8**[(b)]	92.5	20.6	**84.2**[(a)]
4	**5.9** [(c)]	98.4	**10.0**[(b)]	94.3
5	**1.6** [(c)]	100	**4.3**[(c)]	98.6
6			**0.5**[(c)]	99.0
7			**1.0**[(c)]	100
Total	100	100	100	100

*notes: [(a)]Indicate the cut-off point for normal range; [(b)] Indicate the cut-off point for borderline; [(c)] Indicate the cut-off point for abnormal range

The new Brunei cut-off points (see table 5.19) based on gender groupings reveal differences in the classification of the mean range for some subscales. Gender specific determination of cut-offs resulted in a range of scores were reported to be at one-point higher for girls than boys for emotional problems, conduct problems, peer problems. The total difficulties score was marked higher by 2 points for girls. The overall determinant of the cut off scores provided similar threshold across gender for reporting prosocial problems and hyperactive-inattentive problems. Across different genders, the overall determinant of cut off scores provided an equivalent threshold for reporting girls' emotional problems, whereas boys' report of conduct and peer problems provided an equivalent threshold with the overall determinant of cut off scores. Overall using these established cut-off scores, it was estimated that approximates for problems categorised as abnormal was reported highest for conduct problems at 11.9%, hyperactive-inattentive at 10.2% followed by emotional problems at 9.4%, peer problems at 8.6% and prosocial problems at 7.1%. The incidence of Total Difficulties Score (TDS) was reported at 9.9% for this study. This incidence rate of emotional and behavioural problems among adolescents must be treated with caution as this finding in only drawn from reports of parents based on the original version (i.e. existing 5 subscales) of SDQ. An interpretation of these newly proposed cut off scores and the possible meaning that could inform parents' expectation of

adolescents emotional and behavioural difficulties when using the SDQ will be discussed (in the discussion section) in comparison with other studies.

Table 5.19 Incidence of psychological difficulties among adolescents in Brunei, reported by parents reports, based on gender norms

	MALE			FEMALE			Overall Brunei cut-off score
	Normal range	**Border-line**	**Abnormal**	**Normal range**	**Border-line**	**Abnormal**	**Abnormal**
Total difficulties	**0-13**	**14-15**	**16-40**	**0-15**	**16-17**	**18-40**	**17-40**
Exact %	80.2%	10.1%	9.7%	81.3%	9.1%	9.6%	9.9%
Emotional	**0-3**	**4**	**5-10**	**0-4**	**5**	**6-10**	**6-10**
Exact %	79.1%	6.4%	14.5%	78.5%	9.1%	12.4%	9.4%
Conduct	**0-2**	**3**	**4-10**	**0-3**	**4**	**5-10**	**4-10**
Exact %	79.7%	12.8%	7.5%	84.2%	10%	5.8%	11.9%
Hyperactive-inattentive	**0-4**	**5**	**6-10**	**0-4**	**5**	**6-10**	**6-10**
Exact %	77%	13.9%	9,1%	75.1%	13.9%	11%	10.2%
Peer problems	**0-3**	**4**	**5-10**	**0-4**	**5**	**6-10**	**5-10**
Exact %	75.9%	17.6%	6.5%	89.5%	8.1%	2.1%	8.6%
Prosocial	**6-10**	**5**	**0-4**	**6-10**	**5**	**0-4**	**0-4**

5.6 Discussion of parents' reports of SDQ

This is an explorative study on parents' reports of school-aged adolescents' (11 to 16 years old) emotional and behavioural difficulties in Brunei using the Malay translation of SDQ. The first question is exploring what the psychometric properties reveal about parents responses when using the SDQ. The second question is whether parents' scores of SDQ differ across age and gender of adolescents. The third question asks the incidence rate of adolescents emotional and behavioural difficulties using the newly established cut off scores of SDQ. The following section discusses the results of each question.

5.6.1 The psychometric evidence of Brunei parents responses of the Malay translation of SDQ.

The findings from the present study support the argument that culture plays an important role at influencing parents' expectation of adolescents' emotional and behavioural development according to the norm of the society (Nikapota, 2009). This is partly evidenced as Brunei parents' responses of SDQ produced a factor structure that varied from the 5 factor scales of the original English version of SDQ. Although the first eigenvalues produced 6 factor scales, only 4 of the factors were considered stable dimensions with more than 3 items loading on each factor. On the other hand, the 3 factor scales which was offered using the Parallel Analysis approach only provided a better visual representation of some of the loading of the items, but it did not improve the overall understanding of those proposed broadband scales of the SDQ (i.e. internalising problems, externalising problems and prosocial behaviour).

From the 6 factor scales, prosocial items of SDQ were well recognised by parents in Brunei as a distinct dimension. This finding is not unexpected because these 5 prosocial items appeared consistently stable across different cultures as a distinct prosocial factor. Evidence supports this prosocial scale when various translations of SDQ were used in other national samples; the Netherlands (Muris, 2003), in the United States (Dickey and Blumberg, 2004), in Spain (2012) and Thailand (Woerner, 2011). However, several reverse items were also seen to load moderately onto this prosocial factor. This tendency was more salient in some Asian countries like Thailand (Woerner et al., 2011), Japan (Moriwaki & Kamio, 2014) and China (Du,

Kou & Coghill, 2008), but parents in Brunei responded more to these items as positive traits. It was evident that parents in Brunei did not think some of those items were actual problems (see table 5.10) and within the Asian region these items had more positive responses from parents. Hence reversing these items would only reduce the fitness of factor structure pertaining to difficulty scales.

The way parents reported emotional items showed a clear divergence from other similar studies. While 5 of the emotional items had good fit in representing the dimension across different cultures, parents in Brunei viewed them as separate problems i.e. either emotionally depressed or emotionally dependent problems. A possible explanation for the clear divergence of this type of emotional problem was perhaps in this study a promax rotation was used instead of a varimax rotation. Earlier analysis with varimax rotation (where factor remain uncorrelated) did result in a greater number of items converging together (4 of 5 items: see table 5.7 a) onto the emotional factor scale. Similarly, other supporting results make use of this varimax rotation in their studies. However, Brunei parents' responses were subjected to a promax rotation (that allows factors to correlate), which provided a better support for running the Exploratory Factor Analysis (EFA). On the other hand, the low loading of somatic issues might reflect that parents might not strongly see it as difficulties, which then supported the notion that Asian parents viewed it as sociomoral problems. Parents considered it to be more appropriate to discuss these problems with family member, elder, or spiritual or community leader (Kirmayer, 2001). The lack of unity in the pattern of factor structure or emotional problems also seemed to suggest that the items rated in the SDQ did not capture similar definitions of emotional problems. Asian cultures are more likely to stigmatise emotional related problems (Kramer, Kwong, Lee & Chung, 2002) than Western cultures. They might not necessarily see it as a problem which needs clinical attention, but instead view it as a lack of balance in religious and spiritual well-being that caused problems such as worries and fears in an individual (Yahaya, Momtaz & Othman, 2012; Chen, Fu & Leng, 2014).

Parents' responses in Brunei did not reflect a distinct combined hyperactive-inattentive problem of SDQ. This divergence corresponded to SDQ reports by parents in China (Du, Kou & Coghill, 2008) and Spain (Rodriguez-Hernandex et al., 2012). However, parents in Brunei seemed to view these two types of hyperactive behaviours

(restless and fidgeting) as less problematic. Instead, the hyperactive concept was seen as a cause of being 'friendly'. This is because another positive item, 'have at least one good friend (which 90% of parents rated 'true' and 'somewhat true' and so failed to tap peer problems) merged highly with these hyperactive items. It could imply that parents are less likely to see being hyperactivity as a problem in Brunei. This is in contrast with China and Spain, where parents considered to show less tolerance and consider hyperactive behaviour as part of conduct problems. It could possibly be related with some studies that did not see hyperactive behaviour as a distinct problems (Moon, 2011; Rosello & Bernal, 1996), but instead viewed occurrence of hyperactive related problems to be a result of ineffective discipline by parents.

Reports of conduct problems and peer problems by parents in Brunei did not reflect a distinct dimension of SDQ. Although the responses of parents in China and Thailand similarly revealed low fit for these two types of difficulties on their SDQ, it appears that within the context of Brunei, parents less likely to identify those difficulties. Perhaps a possible explanation of this issue lies in the sample that was considered small in this study (n=398) in comparison with other studies (n>500). In the literature, for example among the Chines adolescents, it was reported that young people would find it difficult to express their problems with their parents and tended to be more careful about what they tell their parents want to hear (Rhee, Chang, & Rhee, 2003). Hence, a possible explanation is that Asian parents might know less about issues concerning adolescents peer problems, something which warrant further investigation in future.

The other proposed 3-factor structure from this current study could not be supported for its use to represent the reported emotional and behavioural problems based on parents report in Brunei at this moment. Although Goodman supported the notion that there are advantages of using the suggested broader internalising and externalising SDQ subscales for analysis in low-risk sample, this was not necessary the case when analysis was carried out with reports from the parents in Brunei. However, these broader scales received some support from exploratory analyses in studies from the US (Dickey & Blumberg, 2004) and Belgium (Van Leeuwen, Meerschaert, Bosmans, De Medts, & Braet, 2006). Goodman, Lamping & Ploubidis (2010), examined the SDQ factor structure with data from 18,222 British children and demonstrated that the

examination of 5 subscales did show convergent and discriminant validity when predicting to clinical difficulties. Hence retaining all five subscale could potentially add value when studying high-risk children. In this study, both the suggested factor structures (6 and 3) remain inconclusive. The items did not tap into distinct aspects of a child's mental health when working with a low risk sample, using at least a 3-factor structure should improve the overall visual representation of the SDQ factor structure. Perhaps this comes back to a similar discussion above regarding the analysis of the 6-factor structure. Culturally, some items were not seen or perceived as problems by parents in Brunei which is similar to other parents when the SDQ is used in a number of few Eastern countries. . In addition, this study employed a small sample and this could result in the sensitivity in tapping into the distinct difficulties as predicted by the SDQ.

Despite the poor representation of the SDQ items based on parents' responses in Brunei, the existing 5 factor scales were evaluated to see how reliable and valid the SDQ is if parents' responses continued to be used in reporting emotional and behavioural difficulties of adolescents. Although the factor structure in this study only provided good representation for describing prosocial items, internal reliability estimates moderately supported the use of the emotional problem scales (0.650) and hyperactive-inattentive problems (0.521) of SDQ. In fact the reported Cronbach's alpha from parents' responses for emotional problems in many countries are within the acceptable range of 0.63-0.69 across Britain (Goodman, 2001), Norway (Van, Veenstra & Clench-Ass, 2008), Malaysia (Stokes, Mellor, Yeow, & Hapidzal, 2013), Thailand (Woerner, 2011), Finland (Koskelainen, Sourander & Kaljonen, 2000) and Sweden (Malmberg, Rydell & Smedje, 2011). On the other hand, reported hyperactive problems in Brunei falls below the normal reported range. This lower range was also similarly reported to be low in a neighbouring country, i.e. Malaysia with 0.61 Cronbach's alpha for hyperactive-inattentive problems. The low reliability support for reporting conduct problems and peer problems in Brunei appeared to correspond with parents' reports in Malaysia (Mellor, 2013), Thailand (Woerner, 2011), Japan (Moriwaki, 2014), Finland (2000). In fact Goodman's original study also reported internal reliability of 0.63 for the conduct problem subscale.

Across the difficulties score, the peer problems internal estimate was reported to be the weakest. Although studies in other countries similarly identified this as the lowest internal estimates, this was more apparent in Asian region such as Thailand, Malaysia and China. Despite the lack of internal reliability for some of the SDQ subscales, employing the overall Total Difficulties Score (TDS) of SDQ provided sufficient information about adolescents' difficulties using the SDQ in Brunei. However, item-total correlation highlighted that item 23 "*gets on better with adults than with other children*" had the lowest correlation (0.085) and removing this item slightly improved the internal reliability of the TDS. Statistics revealed that >65% of parents and teachers rated 'true' and somewhat true' when addressing this question. Perhaps the results of this rating indicated that parents might see the outcome of such action as showing how confident adolescents are when dealing with adults. However, there is a possibility that when the term "other children" was translated into Malay as "kanak-kanak", it was more likely that parents would compare adolescents' social circle with those children younger than their age. In every day Malay term, "kanak-kanak" would refer to those younger than 11 years old but this study was assessing adolescents' emotional and behavioural difficulties from the age of 11 to 16 years old. In other English translations of SDQ (www.sdqinfo.com), they used different terms such as "youth" (in the US) and "other young people" (Australia) instead of "children" (UK). In addition, Mellor et al., (2007) in their study with Malaysian samples did not use the original version of the Malay translation of SDQ but another back-to-back translation of the original English version and used the term 'teman seumur" (same-age friend) for both parents' and teachers' reports. Since their study did not provide an analysis of the Malay SDQ factor structure, less is known about how parents and teachers in Malaysia responded to that question. This technical aspect serves to highlight the need to look at the translation of the Malay SDQ to see in what ways the translation of the items had actually led to the inconsistencies of reports when used in different cultures.

The final psychometric analysis reports the construct validity of SDQ. Overall, the existing difficulties subscale of SDQ provided moderate equivalence to corresponding domains of CBCL. Parents' ratings of emotional problems of this SDQ were seen to correspond well to withdrawn issues of the CBCL. This possibly indicates that parents might observe that adolescents who are experiencing emotional problems may tend to withdraw themselves from others. Unlike other studies using the SDQ, their

emotional subscale related closely to somatic problems for Japanese children (Moriwaki & Kamio, 2014) and anxiety problems for Finnish children (Koskelainen, Sourander & Kaljonen, 2000). This suggests that young people internalising issues across cultures are emotionally different. On the other hand, the validity of this emotional scale of parents' responses from the SDQ to the CBCL are somewhat lower than that found in Goodman and Scott (1999), where the parent-rated SDQ and the CBCL correlated highly with one another. It could be argued that Goodman and Scott recruited part of their samples from high-psychiatric risk population which then was said to correspond well with the CBCL because this questionnaire covers a broader range of problem and is commonly used in studies or clinical assessment that included wider psychopathology issues. As a result, the Brunei study corresponds well with several other studies that represent samples from low risk population such as in Japan (Moriwaki & Kamio, 2014) and in Finland (2000). In other words, average correlation of SDQ and CBCL is expected when studies involve samples from low risk or community samples.

As for the hyperactive-inattentive subscale of SDQ, it is not surprising to see only moderate correlation of attention problems with CBCL. This is because parents in Brunei perceived adolescents as having good attention and reflective skills, which led to lower correlation with those nine (9) difficulty items of attention problems of CBCL. The validity test also suggested that the way parents rated items of conduct problems of SDQ related moderately to aggressive behaviour as assessed through items of CBCL. This corresponded to other similar studies from parents' reports in the west like Finland (Koskelainen, Sourander & Kaljonen, 2000) and Dutch (Van Winderfelt, Goedhart, Treffers & Goodman, 2003). Lastly, parents' rating of SDQ could not be validated with social problems as assessed by the CBCL. Although this was generally supported in other studies, peer SDQ validation to social CBCL would still be considered within the moderate range of 0.41 to 0.51 when using Pearson correlation. This could otherwise indicate that parents' expectation of peer socialising may differ according to cultural norms and as a result parents may interpret the questions differently, a differences in norms which is evident between Western and Eastern cultures Crouter & Head, 2002; Kerr & Stattin, 2000; Racz & McMahon, 2011; Smetana, 2008; Tan et al, 2001; Liwag et al 1998). Overall the findings suggest possible cultural influence with the way parents responded to the items of the SDQ

which resulted in a factor structure that differed when describing adolescents' difficulties in Brunei. The next section will examine parents' SDQ scores in relation to any age and gender effects.

5.6.2 Parents scores of SDQ: Age and gender differences in emotional and behavioural difficulties.

The 5-factor structures of SDQ was retained in this study to discuss how parents' scores of SDQ vary with age and gender across different cultures. There was no age effect that emerged from responses provided by parents. With SDQ, parents' expectation of emotional and behavioural difficulties did not differ across young (age 11 -13) and older adolescents (age 14-16). This was in line with findings from community samples such as those from Holland (Muris, 2003) and Malaysia (Mellor, 2007). However other studies reported a descending tendency of parent ratings with age (Hawes & Dadds 2004, Syed 2009, Woerner 2011, Mellor, 2007). It is important to note that age differences in previous studies have included a wide age range: minimum age of 6 to a maximum age of 17 years old. However in this study the age group range was between 11-16 years and it may be less sensitive in capturing significant age effect during the analysis with an average sample size.

This study shows that parents rated girls significantly higher than boys on the subscales assessing emotional symptoms and conduct problems. The emotional scale was in line with many other studies where girls are more likely to be rated higher for emotional problems than boys (Rodriguez-Hernandez et al., 2012; Du et al., 2008, Mellor et al., 2007). However, our parent report for conduct problems contrasts with other related studies. A closer inspection of the conduct problems suggests that there appear to be two items in particular, which might have given rise to this result. With a Mann-Whitney t-test, it was found that tantrum (MEAN value: boys with 0.7 and girls with 1.0) and disobedient (MEAN: boys with 0.5 and girls with 0.6) were rated higher for girls than boys with $p \leq 0.05$. This suggests that parents tend to see girls as experiencing more tantrum and disobedience-related behaviours than boys when at home. However, the way parents in Brunei perceived the term tantrum of SDQ seemed to reflect more of an emotional related problem rather than describing conduct of externalising problems. As this is a novel data, it cannot be compared to

any study so far to explain why Bruneian parents tend to report more conduct problems of SDQ among girls than boys.

5.6.3 The incidence of emotional and behavioural difficulties according to parent reports on the SDQ.

The data shows that parents in Brunei had differed in their expectations for boys in terms of emotional, conduct problems and peer problems since these subscales had cut off scores that were higher by 1 point for boys than girls. In other words, parents would expect boys to show more control over these difficulties compared to girls. Consistent with this idea, at least in Western cultures boys are expected to show less of the "tender" emotions, such as sadness and anxiety (i.e. internalising related problems), and they are allowed to express externalising emotions such as anger (Chaplin, 2015). This gender role expectation is quite universal where in most culture, parents would use more emotional language when communicating with daughters than sons, which might lead to boys being more daring then girls in showing dissatisfaction (Adams, Kuebli, Boyle & Fivush, 1995). This socialisation is likely to lead to increases in girls' expression of emotions and boys' decreased expressions of emotions over time from infancy into childhood. However, with expression of conduct problems, it is not clear why Bruneian parents seemed to expect boys to show fewer problems than girls. The only possible suggestion offered for this study is perhaps the way parents see the items of conduct problems and how they are defined. As seen from table 5.9, parents tend to associate temper with emotional problems, which relates closely to the way girls are expected to express emotional problems. Yet using the effect size calculator for Cohen *(d),* it showed only a small effect size (0.3) was produced between ratings of tempers between boys and girls. Similarly, the effect size for disobedient items between boys and girls are considered small (0.2). As of peer problems, it is not clear why Bruneian parents expect boys to have fewer peer problems than girls. At item level of peer problems (see table 5.17), the Mann-Whitney t-test found no significant differences between ratings of parents for girls and boys. However, because EFA loading of items (table 5.9) provided poor support and parents did not identify these items as peer problems, it might not be appropriate to interpret the items of peer subscales at this stage of study. The data shows that there exist some differences between the benchmark of reporting cut-off scores from responses of parents in Brunei compared to the English version of SDQ. Brunei's cut

off scores for reporting emotional problems and peer problems were higher by one-point compared to the British cut off scores. The slightly higher cut-off points for these subscales possibly suggests that parents in Brunei might not necessarily see these as distinct problems among adolescents. Unlike the original previous study with British parents (Goodman, 2001), they provided clear support for the factor structure of these subscales, and this substantiate their established cut-off points for those problems.

Table 5.20 compares the scale mean of the Total Difficulties Score (TDS) only from the Brunei community samples with those from Britain, Malaysia and Thailand. Across these countries (including the Brunei parents report), reporting the TDS provided good and sufficient support from earlier psychometric analysis. The TDS indicated highest scores from parents' responses in Brunei, which resembled closely those of parents' responses from Thailand. Closer examination of the item-total correlation (see table 5.14) revealed that the highest correlation appeared to result from 3 emotional items (unhappy, clingy, afraid), 1 conduct item (tantrum) and 1inattention item (distracted). However, from table 5.10 it was clear that these conduct and inattentive items were seen by parents as emotional problems rather than conduct or inattentive problems. Hence we can conclude that parents in Brunei tend to see more of the emotional side of adolescents difficulties compared to other type of difficulties. This proposition is supported by Weisz et al. (1997), who investigated the prevalence of child and adolescent behaviour disorders in Thailand and the United States. It was found that while American parents reported more under-controlled problems, Thailand parents were more concerned and reported more over-controlled problems (internalising issues). Hence it might be axiomatic to say that parents in Brunei similarly are more concerned with adolescents' emotional problems.

Table 5.20 Scale means of Total Difficulties Score (TDS): Community samples from Brunei, Britain, Malaysia and Thailand

	Brunei sample	British sample	Malaysian sample	Thailand sample
SDQ	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Total difficulties	10.1	8.4	8.47	11.0
	(5.0)	(5.8)	(4.88)	(5.1)

5.7 Conclusions

Brunei parents responded differently to certain items on the SDQ when compared to the British SDQ (Goodman, 1997, 2001). There were some similarities between the responses of parents in Brunei and in other cultures in relation to emotional problems, hyperactive problems and prosocial development. There seemed to be only minimal support for the existing five-factor structures of the SDQ when parent reports were analysed using the Principal Component Analysis (PCA). The PCA reduced the observed variables forming instead a six-factor structure. However, two of these six subscales had insufficient items loading on them and were considered weak dimensions in describing problems. On the other hand, the suggested 3-factor structure could be the best appropriate factor structure for reporting emotional and behavioural difficulties based on parents reports of SDQ. More items loaded clearer into this broad 3-factor structure compared to the narrow 6- factor structure. However, only the posocial and internalising problems subscales demonstrate meaningful information that could be drawn from the overall structure of SDQ. Despite the lack of support in the SDQ factor structures, the following statistical test revealed that 3 existing subscales (prosocial, emotional problems and hyperactive-inattentive problems) including the Total Difficulties Scores (TDS) produced acceptable reliability support for its use in Brunei. Additionally, moderate validity support for almost all subscales between the SDQ and the CBCL suggests that continued use of the SDQ in Brunei is acceptable. The peer problem subscale failed to provide support in all the basic psychometric tests when used in this study. This study did not identify any age differences in the parent reports. However, this was most likely due to the limited age span in this study. Girls were seen to experience more emotional difficulties compared to boys, which was consistent with most studies. In contrast to other findings where boys were rated higher by parents with conduct problems, parents in Brunei identified these difficulties to be higher among girls than boys. This unexpected finding remain inconclusive and would require further study with the support of a larger sample size to confirm validity. The incidence rate was higher in Brunei compared to British samples (www.sdqinfo.com) for problems related to emotional and prosocial development. The Total Difficulties Score (TDS) was higher in British samples compared to Brunei samples. Some cut-off points were also slightly higher by one point on the subscales compared to the original English version

of SDQ which suggests that parents in Brunei might view some of the behaviours being assessed by the SDQ differently. However, this does not mean that parents in Brunei are more permissive towards misbehaviour. Instead parents' ratings of SDQ indicate that some items may have been less appropriate and possibly parents have a different set of expectations of what they define as difficult behaviour. Moreover, the poor support for some items of SDQ might be due to the parents' observation which is limited only to home context. Hence it is necessary to include teachers to report how these items of SDQ are identified as problems in a different context, the school, where the demands for attention and on-task activities may be required to a greater extend. The next chapter will explore how the Malay version of SDQ is useful for reporting emotional and behavioural problems in Brunei based on teachers' reports.

CHAPTER 6

TEACHER REPORTS OF EMOTIONAL AND BEHAVIOURAL DIFFICULTIES (EBD) OF ADOLESCENTS IN BRUNEI USING THE SDQ

6.1 Introduction

To complement Chapter 5, this chapter presents the first exploratory study of emotional and behavioural difficulties among adolescents in Brunei using teacher reports. It analyses data gathered using the Malay translated version of the Strength and Difficulties Questionnaires (SDQ). The use of the teacher version of SDQ within this geographical region has been limited to exploring the internal consistencies of SDQ in Thailand and Malaysia. To date, no statistical evidence is available from Brunei, a Malay country similar to Malaysia, on the usefulness of using the SDQ for identifying emotional and behavioural difficulties. Hence the gathered teacher data from Brunei allows this analysis to inform researchers whether the emerged subscales of difficulties and strength similar or different to the existing 5-factor subscales of SDQ. Moreover, the finding will provide further evidence on the efficacy of the SDQ as an assessment measure when used in Brunei.

Previous SDQ studies reported that emotional and behavioural difficulties from teachers' ratings may be more comparable across cultures compared to other respondents, such as parents, because teachers are a more homogeneous group than parents and may have a better understanding of written questions than parents who come from all social classes and educational backgrounds (Kresanov et al, 1998). In addition, due to the nature of the classroom, teachers are likely to notice different behaviours when compared to parent. For example, externalising behaviour may disrupt classroom activities and the learning of other students and teachers may be less willing to tolerate such behaviours among students (McConaughy & Skiba, 1993). Furthermore, teachers have some of child development based on their teacher training and may be more informed of 'normative' age trends in behaviour. They also interact with groups of young adolescents which would facilitate observation of behavioural differences (see Chapter 2 for discussion on these issues). However, some previous research has shown that there is limited support for some of the subscales of SDQ when used in the Asian region (Du et al., 2008; Woerner et al., 2011). This

study will examine whether Bruneian teachers SDQ scores resemble closely teacher reports from Eastern or Western countries.

Previous analysis of the Malay translation of SDQ conducted in Malaysia (Stokes, Mellor, Yeow, Hapidzal, 2013) did not provide evidence of the factor structure of the SDQ. Consequently, it will not be possible to examine similarities between teachers in both Malay countries in their responses of items' groupings of the SDQ. However, some evidence of poor reliability on the existing 5 factor subscales were reported in Malaysia, and so it might be expected that Bruneian teachers might also respond to some items of SDQ differently. This might produce low internal reliability later in the analysis. Low internal reliability was reported for some subscales of SDQ from Thailand (Woerner et al., 2011) and China (Du, Kou & Coghill, 2008). Since eastern collectivist culture is widely in evidence within the Asian region and it is therefore axiomatic that Brunei's culture would also fall into the collectivist dimension (Black, 2001). Research suggested that when the SDQ is used within the Asian region that teacher ratings showed some evidence of age effects. For instance, in Thailand (Woerner et al., 2011), Japan (Moriwaki & Kamio, 2014) and China (Du et al, 2011) teachers' SDQ reports showed a decline in difficulties as age increased. Additionally, teachers in Japan also reported that teachers noticed more boys than girls exhibiting externalising problems, commonly similar to a Western study from Spain (Rodriguez-Hernandex et al., 2012). This was in contrast to a Malay speaking country like Malaysia where teachers did not identify any age and gender differences. Hence it is also possible that teachers in Brunei might not identify age and gender differences like Malaysian teachers or that they might identify age and gender expectations as reported across a number of other cultures. Previously it was also reported that the cut off scores for reporting SDQ range for normal, borderline and abnormal cases varied across different cultures. Therefore it is also possible to expect that the Malay translation of SDQ might produce a different cut off score than the original English version of SDQ.

6.2 The present study

This study investigated teachers' responses of reporting emotional and behavioural difficulties of adolescents in Brunei using the existing Malay translation of SDQ. It explored whether the Malay version of SDQ can effectively measures difficulties and

strength in Brunei when used by teachers and whether the subscales of SDQ correspond well (construct validity) with related domains/subscales of another criterion measure. It then continued to explore teachers' responses of the existing 5 subscales of SDQ to see whether age and gender differences emerge in their SDQ scores. Finally this study investigated the incidence rate of reported emotional and behavioural difficulties using the existing 5 subscales of SDQ.

Therefore, this chapter focuses on investigating Bruneian teachers' responses on items of SDQ to see if items converge or diverge from the original version of SDQ, whether any teachers' scores suggest changes depending on age and/or gender of adolescents, and if Brunei's cut off scores remain similar or different to the existing cut off scores produced by Goodman (1997).

This chapter addresses the following three research questions:

4. What are the psychometric properties of the teachers' report on SDQ when used in Brunei?
    a. What is the factor structure of teacher reports' on the SDQ?
    b. What is the internal consistency of sub-scales of the teacher reports' on the SDQ?
    c. What is the construct validity of the SDQ teachers' reports?
5. Are there any age and gender differences in teachers' scores on the SDQ?
6. What is the incidence of emotional and behavioural difficulties of adolescents according to the teachers' reports?

6.2.1 Participants

The ratio of teacher to student varied in this study since the schools were in charge of nominating teachers they thought should participate. Completed questionnaires with permission to participate were obtained for 329 teacher version of SDQ and only 71 teacher version of TRF.

6.2.1.1 Gender differences in Teachers' reports

The majority of the SDQ reports were obtained from female teachers responses (76%). The rationale for this analysis was to check if the researcher could combine data across respondents for subsequent analyses. Only 3 items showed statistically

significant differences where female teachers' responses had higher ratings than male teachers' responses for item 11 (at least one good friend), item 15 (distracted), item 16 (clingy) as determined by one-way ANOVA. The Total Difficulties Score (TDS) of SDQ also indicated statistically significant differences between male and female respondents of SDQ as determined by one-way ANOVA ($F(1,324) = 4.170$, $p=0.042$). The remaining of the SDQ items (22 items) did not differ significantly between female and male responses. Since only 3 of 25 items had significant higher ratings from female responses, analysis following this section will consider respondents of SDQ as one group representing teachers' responses from Brunei.

Table 6.1 Gender differences in Teacher SDQ for adolescents in Brunei

Item number	Item of SDQ	Means		Sig
		Male (n=86 students)	Female (n=278 students)	
1	considerate	1.58	1.56	0.856
2	restless	0.63	0.53	0.302
3	somatic	0.14	0.19	0.405
4	shares	1.26	1.36	0.172
5	temper	0.21	0.25	0.513
6	solitary	0.32	0.30	0.801
7	obedient	0.27	0.41	0.058
8	worries	0.27	0.40	0.065
9	Helpful if someone hurt	1.38	1.35	0.696
10	fidgety	0.28	0.21	0.241
11	Has good friend	0.27	0.44	0.035*
12	fights	0077	0.182	0.059
13	unhappy	0.103	0.109	0.892
14	generally liked	0.62	0.58	0.648
15	easily distracted	0.487	0.697	0.018*
16	nervous in new situation	0.308	0.536	0.004*
17	kind to younger children	1.32	1.35	0.730
18	lies of cheats	0.064	0.101	0.347
19	picked or bullied	0.077	0.089	0.771
20	often volunteers	1.44	1.38	0.492
21	thinks before acting	0.68	0.58	0.154

22	steals	0.000	0.000	0
23	better with adults than with children	1.13	1.19	0.512
24	many fears	0.27	0.27	0.939
25	Good attention	0.59	0.62	0.733
	Total Difficulties score	6.78	7.89	0.042*

**n represents the number of students and not the total number of teachers (a teacher may provide a maximum of 4 responses included in the count)*

6.3 Psychometric properties of teacher reports' on the SDQ

In this section, brief technical steps outlining the choices that were made in exploring the fundamental psychometric properties using the SPSS for Mac 21 (SPSS Inc., 2013) are described. A Principal Component Analysis (PCA) was run to explore the relationships within a group of observed variables, as measured through questions or items of the SDQ (Beavers et al, 2013). This is followed by the report of internal reliability to see whether each subscale of SDQ actually reflected a level of consistency in the way teachers were rating the intended subscales. Investigation was then focused on the construct validity report to check if the scores of the subscale from the SDQ teacher measure was correlated to the related criterion, in corresponding domain (subscales) of the Teacher Report Form (TRF) to evaluate if the SDQ actually measures what it claims to measure.

6.3.1 The psychometric properties of SDQ

6.3.1.1 Principal Component Analysis (PCA) of SDQ

Preliminary analysis of the responses at the item level was carried out to assess the pattern of responses and the rate of missing values in the data. Any missing values deliberately left by participants were completely removed from the database prior to analysis. This resulted in 0% missing values and gave 329 completed teachers' responses. This is a small sample, however this study aimed at exploring the data, not hypothesis or theory testing, nor was it intended as a "validation" of instruments. Although the SDQ was hypothesised with the predicted 5-factor scales (emotional problems, conduct difficulties, hyperactive-inattentive problems, peer issues and prosocial skills) in the original study (Goodman, 2001), here it was used with the assumption that it has no prior hypothesis about factors or patterns of measured

variables. This approach is used to explore what factor structure would emerge from Brunei teachers' responses to the SDQ when factor analysis is run. Hence, the Principal Component Analysis (PCA) serves the purpose in identifying the underlying relationships between measure variables of SDQ. The Principal Component Analysis (by default in SPSS) was used as an extraction method, which follows closely the approach applied in related studies. Applying PCA is recommended as the first step to extract maximum variance from large data set producing smaller number of components (Tabachnick & Fidell, 2007). A varimax rotation was adopted to maximise the orthogonality, interpretability, simplification and the variance of factors, where the factors remained uncorrelated (Khan, 2006). Varimax was used, as it is the recommended rotation technique to use as a first step in exploring data set (Yong & Pearce, 2013). Using varimax rotation produces factors that are uncorrelated. However analysis was only possible for all 24 items except for item 22 *(steals)* which provided zero variance and therefore omission was necessary in order to extract rotation for the factor analysis. Zero variance was reported for this item since all responses from teacher had rated it as 'not true' for all students.

The correlation matrix output (table 6.2) indicated that low correlation ($r < +/- 0.30$) present a lack of patterned relationships. However, correlation between positive items and negative items are expected to have very low and in some cases negative correlation coefficient. For instance item 1 (considerate) with item 2 (restless) only correlated at -0.170. As a follow up, the determinant score was above the rule of thumb of 0.00001 (.001) and overall indicating that the correlation matrix did not have any high correlation that are above r=+/-.09 which would otherwise indicate that the data may have a problem of multicollinearity. (i.e. the Squared Multiple Correlation close to 1.0).

Table 6.2. Teacher SDQ correlation matrix for some variables

Correlation	SDQ items					
	considerate	restless	somatic	shares	temper	solitary
considerate	1.000	-.170	-.069	.391	-.133	.049
restless	-.170	1.000	.167	-.081	.359	-.139
somatic	-.069	.167	1.000	-.045	.372	.077
shares	.391	-.081	-.045	1.000	-.037	-.055
temper	-.133	.359	.372	-.037	1.000	-.010
solitary	.049	-.139	.077	-.055	-.010	1.000
obedient	.489	-.174	-.026	.314	-.099	.094
worries	-.030	.081	.144	.130	.227	.222
Helpful if someone hurt	.444	-.036	-.008	.576	.051	-.005
fidgety	-.138	.420	.170	-.026	.292	-.011
Has good friend	.113	.007	.083	.078	.075	-.024
fights	-.180	.445	.206	-.066	.422	-.114
unhappy	-.058	.015	.186	.052	.206	.228

Note: Truncated sample of variables. The Determinant score is 0.011.

The *Bartlett's Test of Sphericity* (significant level of p< .05) confirms that the SDQ measure of teachers' reports provided some support for patterned relationships amongst the variables (p<.001). Following this, the result of the Kaiser-Meyer-Olkin Measure (KMO) of Sampling Adequacy (0.843 i.e. cut-off above .05) and the diagonal element of the Anti-Correlation matrix that has the 'a' superscript (see table 6.3; cut-off of above .05), indicated that generally the SDQ test was suitable for Principal Component Analysis (PCA).

Table 6.3 Teacher SDQ Anti-image correlation matrix

Anti-image Correlation	SDQ items					
	considerate	restless	somatic	shares	temper	solitary
considerate	.920[a]	-.001	-.024	-.077	.055	-.062
restless	-.001	.776[a]	.048	.055	-.191	.060
somatic	-.024	.048	.770[a]	.048	-.299	-.045
shares	-.077	.055	.048	.886[a]	.045	.085
temper	.055	-.191	-.299	.045	.763[a]	.015
solitary	-.062	.060	-.045	.085	.015	.661[a]

Note: Truncated sample of variables. The Anti-Image covariance is not shown.

In determining the number of factors, 3 steps were explored in the analysis, Firstly, the *Total Variance Explained* table (see table 6.4) indicates that Eigenvalues and variance after rotation produced 5 factors. Additionally, the averaged extracted communalities (table 6.5) was greater than .05 and the sample size was above 250. Hence, the reported Kaiser Criterion was said to be reliable. Secondly, the scree plot (figure 6.1) consisting of eigenvalues and data points above the break (i.e. point of inflexion) were considered valid factors Considering that our teachers' responses include more than 200 samples, using this scree test was deemed valid and a horizontal line and a vertical line starting from each end of the curve were drawn. Drawing from both the Eigen values and scree test, the SDQ in this study confirmed the emergence of 5 factors. (The 5 factors will be described following a few more steps of analysis). The final step using the program called Monte Carlo PCA for Parallel Analysis would generate random results of Eigenvalues which will be compared against the first Eigenvalues produced from table 5.4 Based on the assumption that if the first Eigenvalue is larger than the criterion value from parallel analysis, the factor will be retained (or accepted). As a result, only three (3) factors were accepted (see 6.6). However, for the purpose of this analysis, both suggested factors (5 and 3 factors) will be analysed closely to understand which factor structure would offer the best representation for the SDQ.

Table 6.4 Teacher SDQ Total Variance Explained for extracted factors

	Initial Eigenvalues		Extraction Sums of Squared Loadings		Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Total	% of Variance	Total	% of Variance	Cumulative %
1	4.905	20.439	4.905	20.439	4.236	17.650	17.650
2	3.526	14.693	3.526	14.693	2.595	10.813	28.463
3	1.965	8.188	1.965	8.188	2.549	10.621	39.084
4	1.330	5.543	1.330	5.543	2.264	9.433	48.517
5	1.093	4.553	1.093	4.553	1.176	4.900	53.417
6	.945	3.937					
7	.939	3.913					
8	.873	3.638					
9	.804	3.348					

Table 6.5 SPSS output for Communalities

Item of SDQ	Initial	Extraction
considerate	1.000	.535
restless	1.000	.566
somatic	1.000	.391
shares	1.000	.563
temper	1.000	.608
solitary	1.000	.472
obedient	1.000	.550
worries	1.000	.569
Helpful if someone hurt	1.000	.636
fidgety	1.000	.461
Has good friend	1.000	.631
fights	1.000	.586
unhappy	1.000	.507
generally liked	1.000	.535
easily distracted	1.000	.697
nervous in new situation	1.000	.633
kind to younger children	1.000	.607
lies of cheats	1.000	.421
picked or bullied	1.000	.318

often volunteers	1.000	.586
thinks before acting	1.000	.505
steals	1.000	.330
better with adults than with children	1.000	.559
many fears	1.000	.554
Good attention	1.000	.535

Figure 6.1 Scree plot illustrating the five factors

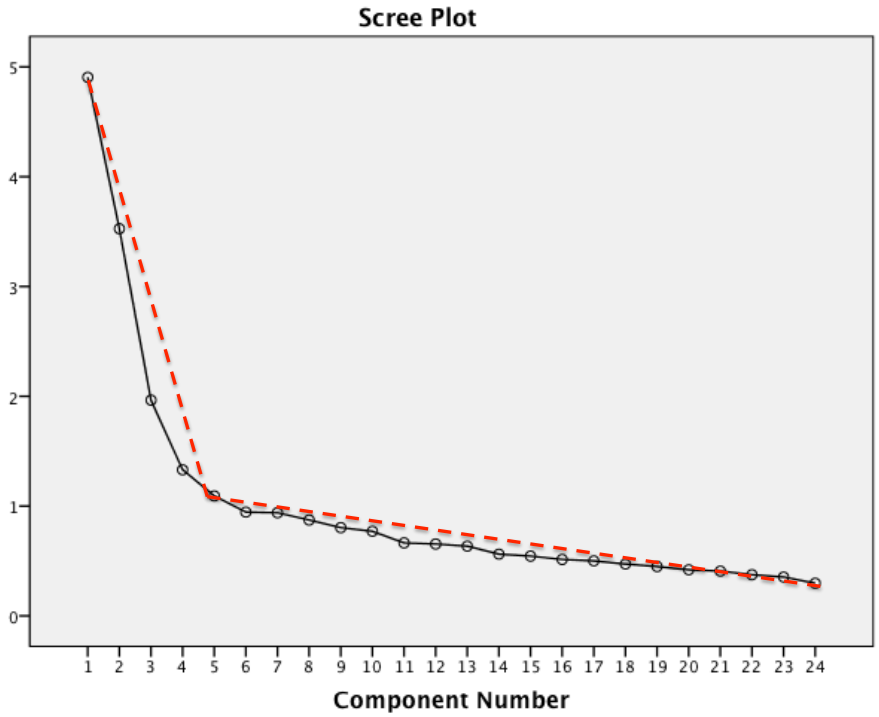


Table 6.6 Comparison of eigenvalues from PCA and criterion values from parallel analysis

Component number	Actual eigenvalue from PCA	Criterion value from parallel analysis	Decision
1	4.905	1.5375	Accept
2	3.526	1.4533	Accept
3	1.965	1.3829	Accept
4	1.330	1.3345	Reject
5	1.093	1.2862	Reject

Varimax rotation produced a Rotated Component Matrix (table 6.7) where suppressing small coefficients helps with the interpretation. The factor loadings show that the factors were valid with at least 4 variables per factors that were above 0.40.

The last factor subscale only had 1 high loading that cut across the various subscales. The Factor Plot (not shown) produced using SPSS was not useful for interpretation in this study when there are more than 3 factors identified. The rotation technique produced the Component Transformation Matrix (table 6.8) and the result indicated that it did not produce a symmetrical off-diagonal element for this case when using the varimax (orthogonal) rotation technique. This presents a perception that our analysis of the SDQ factors may be correlated. Hence a rotation using the promax (oblique) that allows factors to correlate was analysed next. However, when the SDQ was rotated using the promax technique, the Pattern Matrix produced factor loading that was identical to that performed using the varimax rotation (see table 6.7a & b). However, with promax rotation, several higher loadings were evident for factors 1 and 2 than those loadings from the varimax rotation. Hence the loadings of the Pattern Matrix were chosen and simplified for visual purpose in describing how items of SDQ converge or diverge with the existing 5-factor structures of SDQ. This is shown in table 6.9 below.

Table 6.7 SDQ teacher component matrix

a) Rotated Component Matrix[a]

Items of SDQ	Component				
	1	2	3	4	5
caring	.790				
helpful	.760				
kind	.757				
shares	.721				
popular	.664				.270
consid	.648	-.212		-.203	
oldbest	.554				
obeys	.540			-.376	.279
reflect	.487	-.208		-.472	
fights		.745			
tantrum		.738			
restles		.678		.307	
fidgety		.617			
lies		.477		.406	
somatic		.384	.299		.382
afraid			.729		

worries			.702		
unhappy			.693		
loner			.583	-.318	
bullied			.465		.269
distrac			.209	.773	
attends	.403			-.614	
clingy			.485	.612	
friend					.782

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 6 iterations.

b) Pattern Matrix[a]

Items of SDQ	Component				
	1	2	3	4	5
tcaring	.805				
tkind	.789				
thelpout	.772				
tshares	.757			.233	
tpopular	.642				.252
tconsid	.590				
toldbest	.572				
tobeys	.431			-.327	.259
ttantrum		.798			
tfights		.792			
trestles		.661		.211	
tfidgety		.607			
tlies		.402		.343	
tafraid			.720		
tworries			.696		
tunhappy			.687		
tloner	-.218		.645	-.343	
tbullied			.442	.216	.260
tdistrac				.845	
tclingy			.417	.649	
tattends	.304			-.638	
treflect	.415			-.463	
tfriend					.804

tsomatic	.377	.253	.387

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.
Rotation converged in 6 iterations.

Table 6.8 SDQ Factor Transformation Matrix of teacher reports

Component	1	2	3	4	5	6
1	.808	-.395	-.109	-.420	.060	.808
2	.494	.492	.601	.355	.166	.494
3	.260	.530	-.779	.208	.031	.260
4	-.138	.555	.118	-.809	.068	-.138
5	-.132	-.114	-.078	.015	.981	-.132
6	.808	-.395	-.109	-.420	.060	.808

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization

Table 6.9 SDQ 6-factor Analyses

Teacher SDQ: School Sample of 329 School Children, Aged 11-16					
	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**
Total variance explained	17.7	910.8	10.6	9.4	4.9
Factor loadings					
Prosocial					
1 considerate	**0.590**				
4 shares	**0.757**				
9 caring	**0.805**				
17 kind	**0.729**				
20 helps out	**0.772**				
Emotional					
3 somatic		**0.377**			0.387
8 worries			**0.696**		
13 unhappy			**0.687**		
16 clingy			**0.417**	0.649	
24fears			**0/720**		
Peers					
6 solitary			**0.645**	**-0.343**	
11 good friend*					**0.804**
14 popular*	**0.642**				
19 bullied			**0.442**		
23 better with adults than children	**0.572**				

Hyperactivity-Inattentive			
2 restless		**0.661**	
10 fidgets		**0.607**	
15 distractible			0.845
21 reflective*	0.415		-0.463
25 attentive*	0.304		-0.638
Conduct			
5 tempers		**0.798**	
7 obedient*	0.431		
12 fights		**0.792**	
18 lies		**0.402**	0.343
22 steals (not computed due to zero variance)			

Notes: *Reversed items. Only factor loadings > .30 are shown. Principal Component Analysis with Promax rotation presented according to the predicted 5 subscales of SDQ to illustrate how items converge and diverge from this original version of SDQ-item loadings.

In comparison with the English version of SDQ, table 6.8 shows the factor structure of teacher reports on the Malay translation version of SDQ which revealed that Bruneian teachers' responses did produce the 5-factor structure of SDQ, but with a different pattern of loadings compared to those found in the original study of British teachers (Goodman, 2001). Only the prosocial behaviour items loaded convincingly on the predicted factor 1 of prosocial subscale for Bruneian teachers. Additionally, 3 items also loaded as positive responses from Bruneian teachers whilst British teachers had identified these as problematic. Teachers in Brunei seemed to recognise item 23 (better with adults than with children) as a positive trait instead of peer problems. More than 80% of teachers rated 'true' and 'somewhat true' for this item. Another two reverse items did not fall onto the respective difficulties subscales and instead loaded positively onto the prosocial subscales of SDQ (see table 6.9 below). Such reverse items are item 12 (popular) of peer problems and item 7 (obedient) of conduct problem loaded positively onto the prosocial subscale. The hyperactivity-inattentive problem subscale saw a clear separation between these two types of difficulties. Items of hyperactive traits (restless and fidgets) loaded together and separately from those of inattentive traits (distractible, unreflective and inattentive). These hyperactive traits

loaded together with items of conduct problems such as tempers (item 5), reflective (item 21) and attentive (item 25) which could be described as a factor labelled as conduct-hyperactive problems. The way teachers responded to emotional items were less convincing in describing them as emotional problems. Only 3 items (worries, unhappy and clingy) of emotional problem converged together. Joining these were two other items from peer problem (item 6 of solitary and item 19 of bullied). Compilation of these items into factor 3 could be described as emotional-depressed problems. One of the emotional items (clingy) that diverged away from emotional problem loaded well with 3 items of inattentive problems (distracted, inattentive and unreflective) under factor 4. This factor could be described as inattentive-dependent difficulties related. The final factor (5) only had 2 items with one poor loading of somatic problems that diverged from emotional problems and another strong positive loading of reverse items but that diverged away from peer problem i.e. have at least one good friend. This last factor could not be clearly defined because it did not provide direction of difficulties.

Table 6.10 Percentage of reverse items with evidence of more positive responses

SDQ items	Ratings of parents		
	Not true (%)	Somewhat true (%)	Certainly true (%)
Popular	**4.9**	**48.3**	**46.8**
Obeys	**4.0**	**28.0**	**67.2**

Although 5 factors emerged as predicted of the original version of SDQ, the last 5th factor did not have sufficient items loadings on the factor subscale and was generally considered weak and unstable dimensions of structure (Costello & Osbourne, 2005).

Table 6.11 SDQ 3-factor Analyses

	Factor 1	Factor 2	Factor 3
Total variance explained	13.7	9.3	8.3
Factor loadings **Prosocial**			
1 considerate	**0.656**		
4 shares	**0.693**		

9 caring	**0.805**		
17 kind	**0.754**		
20 helps out	**0.701**		
Emotional			
3 somatic		**0.335**	
8 worries			**0.684**
13 unhappy			**0.703**
16 clingy			**0.508**
24fears			**0.740**
Peers			
6 solitary			**0.595**
11 good friend*	**0.247**		
14 popular*	**0.701**		
19 bullied			**0.503**
23 better with adults than children	**0.571**		
Hyperactivity-			
Inattentive			
2 restless		**0.773**	
10 fidgets		**0.584**	
15 distractible		**0.548**	
21 reflective*	**0.480**		
25 attentive*	**0.422**		
Conduct			
5 tempers		**0.586**	
7 obedient*	**0.573**		
12 fights		**0.688**	
18 lies		**0.609**	
22 steals			

A closer examination of the 3-factor structure on the Malay translation version of the SDQ (refer table 6.11), provided a slight better visual representation of the overall structure of the SDQ. Having said that, there were also differences in several factor loadings leading to an overall structure that was different from the reported broad construct of internalising (grouping emotional and peer problems) and externalisng problems (grouping conduct problems and hyperactive-inattentive problems) as proposed by Goodman (2001). Factor 1 continues to represent positive elements on the SDQ which could be labelled as prosocial behaviour. The 4 emotional items provided a clear loading of emotional problems however, this did not group well with items from the peer problem scale to inform the label as 'internalisng problems scale'. On the other hand, most items of hyperactive-inattentive problem and the conduct

problem scale seemed to load well together and labelled as externalising problems. All other remaining items which were reversed items could be loaded onto the prosocial scale

Overall, teachers' responses to the Malay translation of SDQ produced a different factor scale than that which emerged from the original English version of SDQ. Since at this stage the study serves an exploratory purpose, not hypothesising nor theory testing, the 5-factor and 3-factor structures that were found in this SDQ could not yet be confirmed. Hence the following analysis will continue to evaluate the original 5-factor structures of the SDQ. Doing so will provide some insights into how reliable and valid the SDQ is if teachers in Brunei continue to report emotional and behavioural difficulties of adolescents using the existing 5-factor structures as proposed by Goodman (1997, 2001).

6.3.1. Internal consistency of teacher SDQ subscales

Internal reliability for the 5 factor subscales (prosocial, emotional problems, hyperactivity-inattentive problems, peer issues and conduct problems) were examined to see whether teachers in Brunei would show low or high agreement in their ratings of items are expected when using the original 5 subscales of SDQ. Since an earlier section indicated some variation in the pattern of the Malay translation of SDQ from the original version of SDQ, we would anticipate some low internal reliability to appear from responses provided by teachers. George and Mallery (2003) provided the following rules of thumb: " > 0.9 - Excellent, > 0.8 - Good, > 0.7 - Acceptable, > 0.6 - Questionable, > 0.5 - Poor, and < 0.5 - Unacceptable" (p. 231). Similarly, Cicchetti (1994) proposed that a Cronbach's alpha of 0.7 is considered desirable for reporting internal consistency.

Overall, Cronbach's alpha (table 6.11) revealed that teachers' rating for all items pertaining to difficulties (total difficulties score) had good internal consistency (0.7). The factor scales of the teachers' report were further confirmed through the report of internal consistency. As expected, teachers' report of prosocial behaviour (factor 1) was internally consistent with excellent reliability estimates. Teachers' ratings for items assessing hyperactive-inattentive problems produced good acceptable internal

reliability estimates. The Cronbach's alpha of emotional scale indicated that teachers were consistent in their ratings in assessing all items of emotional problems. However removing item 3 (somatic complaint) increased the internal consistency. Teachers' responses to all items measuring conduct problem were of reasonably acceptable consistency (Cronbach's alpha >.0.5). Internal reliability estimates highlighted that the removal of item 7 (obedient) would increase the internal reliability estimates. Furthermore, it was as expected that teachers' scores had the lowest agreement when assessing items of peer problems. The reported Cronbach's alpha produced a poor internal estimate (0.01) and even omitting item 23 (gets on better with adults than children) the poor internal consistency remained

TABLE 6.12 Cronbach's alpha coefficients and means (standard deviations) of the teacher SDQ subscales

SDQ Scales for Teachers	Cronbach's alpha	Means and Standard Deviations	Items whose omission improve alpha	Cronbach's alpha after omission
Total difficulties	0.717	7.80 (4.19)	Gets on better with adults than children (Item 23)	0.770
Emotional	0.686	1.42 (1.69)	Complaints of headache, stomach-aches (Item 3)	0.701
Conduct	0.568	0.85 (1.19)	Generally obedient (Item 7)	0.606
Hyper	0.691	2.78 (2.08)		
Peer	0.01	2.55 (1.27)	Gets on better with adults than children (Item 23)	0.225
Prosocial	0.823	7.03 (2.25)		

However, it is important to note that the SDQ subscales only have five items each and this small number of questions with poor interrelatedness between items may have led to the lower reading for Cronbach's alpha. Analysis of Pearson and Spearman (see table 6.13) produced different results with poor correlation coefficients that were lower than 0.4. Hence because SDQ score were not normally distributed, the item-total correlation was analysed using the Spearman rho and a total of 8 items of SDQ

were listed with poor correlation coefficients. Two items of emotional, four of peer problems and two items of conduct problems reported correlations of less than 0.4 (poor) with the item-total score. Closer examination of the item-total correlation (see table 6.14) revealed that the highest correlation appeared to result from 5 items of hyperactive-inattentive problem (restless, fidgets, distracted, inattentive and unreflective), 2 items of emotional problem (clingy and worries) and conduct problem (tantrum and disobedient)..

Table 6.13 Pearson's correlation and Spearman's correlation: Items with item-total correlation of less than 0.4 (i.e. considered as poor)

Item of SDQ	Correlation	
	Pearson correlation (Sig)	Spearman correlation (sig)
loner	0.163**	0.164**
bullied	0.303***	0.265**
unhappy	0.397***	0.343**
bullied	0.303***	0.265***
friend	0.136**	0.180***
Old best	0.040	0.017
somatic	>0.4***	0.347**
lies	>0.4***	0.398**
Less popular	0343***	>0.4***

*** Correlation is significant at the .0.001 level (2 tailed)
** Correlation is significant at the .0.01 level (2 tailed)
*Correlation is significant at the 0.05 level (2 tailed)

Table 6.14 Item-Total correlations with subscales totals with only correlation value above 0.4 shown.

Item of SDQ	Correlation	
	Pearson correlation (Sig)	Spearman correlation (sig)
restless	0.552***	0.549**
Tantrum	0.481***	0.429***
Worries	0.467***	0.438***
fidgets	0.514***	0.443***
distract	0.601***	0.591***
Clingy	0.631***	0.608***
disobedient	0.418***	0.429***
Not reflective	0.541***	0.486***
Less attentive	0.504***	0.516***

*** Correlation is significant at the .0.001 level (2 tailed)
** Correlation is significant at the .0.01 level (2 tailed)

Overall, the 5-factor scales of SDQ provided acceptable consistency in representing problems associated with describing four subscales of SDQ: emotional problems, conduct problems, hyperactive-inattentive problems, prosocial behaviours and the Total Difficulties Score (TDS). The next analysis evaluates how well the original 5-factor scale of SDQ reflects its construct validity to see if the teachers' reports of SDQ subscales actually measure what they claim to measure.

6.3.1.3 Construct validity of the SDQ teachers report.

Construct validity (criterion-related) was carried out to check if the scores of the subscale from the SDQ teachers measure are correlated to a related criterion, in the corresponding domains (subscales) of the Teacher Report Form (TRF). Hence this approach informs us the degree to which teachers' reports of SDQ subscales actually measure what they claim to measure. Since earlier analysis indicated weak factor structure combined with some good to acceptable internal reliabilities for some of the factor subscales, it is expected to find some low validity to appear from responses provided by teachers.

A sub-sample of 71 teachers' reports was available to carry out the construct validity test. The Pearson Product Moment correlation (see table 6.13 below) examined the associations between the total scores and the corresponding domains of difficulties

subscales of the SDQ and TRF (using the Spearman rho correlation produced almost similar results). It was reported to be significant at $p \leq 0.05$ for all corresponding domains. Overall, the way teachers rated the Total Difficulties Score (TDS) of SDQ corresponded highly to reasonably well to the TRF. Among all the SDQ subscales measuring difficulties, the emotional symptoms exhibited the highest equivalence to TRF internalising problems. In particular, this was seen as a result of SDQ emotional items that matched well with the way teachers rated the somatic problems of TRF rather than those items measuring the withdrawn and anxious-depressed symptoms of TRF. The next SDQ subscale is the hyperactive-inattentive problems of TRF, which corresponded well with the way teachers rated the attention problems of TRF. Another fairly comparable scores revealed that the way teachers rated conduct problems of SDQ resembled fairly well with items measuring delinquent behaviour from the TRF rather than those items measuring aggression from the TRF. Finally, teachers' ratings of peer problems of SDQ could not be validated with the social problems of TRF.

Table 6.15 Correlations between teacher reports on the SDQ and the TRF

Scores	Teacher-report
	SDQ/CBCL n=71
Total/Total	0.771**
Conduct problems/Externalising	0.490**
Conduct problems/Delinquent	0.543**
Conduct problems/Aggressive	0.427**
Hyperactivity/Attention problems	0.748**
Emotional symptoms/Internalising	0.808**
Emotional symptoms/Withdrawn	0.627**
Emotional symptoms/Somatic problems	0.818**
Emotional symptoms/Anxious-depressed	0.681**
Peer problems/Social problems	0.291*

Overall, only 3 (Emotional problems, Hyperactive-inattentive problems and Conduct problems) of 4 difficulties factor subscales of SDQ including the Total Difficulties Score (TDS) represented moderate validity support in measuring what it claims to measure.

6.3.2 Findings of psychometric properties of the teacher report SDQ

Three basic tests were carried out to evaluate the ways teachers in Brunei provided their responses of emotional and behavioural difficulties using the Strength and Difficulties Questionnaires (SDQ). The overview of the factor structure of the SDQ indicated that the Principal Component Analysis (PCA) did tap into the 5-factor scales, however it differed from the original 5-factor scale of SDQ. Although 5-factor subscales were produced, the 5th factor was reported to have insufficient items loadings on the factor subscale and would be considered a weak and unstable dimension of the structure. From the newly emerged factor structure, only the Prosocial subscale had very good loadings for all items that merged together. Teachers seemed to view problems associated with hyperactivity as separate from problems of inattentive behaviour. They viewed these hyperactive problems to relate well with almost all items of conduct problems. The way teachers described emotional problems was closely related to items of depressed symptoms. Teachers viewed adolescents who have inattentive problems to be clingy as well. The remaining items of the problem scales provided poor fit with loadings dispersed across other factors in particular for the predicted factor scale of peer problems. The overall poor fit of these subscales was mainly caused by 3 reverse items (*has at least one good friend, popular* and *obedient*) that failed to tap to any negative traits and instead loaded on the positive factor of prosocial behaviour.

Following the evaluation of the existing SDQ 5-factor structures, all 4 subscales (prosocial, emotional problems, conduct problems, hyperactive-inattentive problems subscales including the Total Difficulties Score (TDS) provided support for good to moderate internal consistencies (Cronbach's alpha >0.6) reflecting an acceptable reliability measure for those subscales only. Peer problem provided low support for item inter-relatedness (low internal consistencies). This low reliability factor was actually evidenced in the Spearman product moment correlation where four of five items from peer problem reported poor (<0.4) correlations with item-total score. Across the 4 difficulties scales, the final analysis found that the SDQ Malay translation had high to moderate validity support for only 3 of the factor scales of SDQ. High equivalence to TRF was evidenced for emotional symptoms (SDQ) with somatic problems (TRF), hyperactive-inattentive problem (SDQ) with attention

problems (TRF) and conduct problems (SDQ) with delinquent problems (TRF). Teachers' rating of peer problem of SDQ had poor validation with the social problems of TRF. The overall result showed that the Malay translation of SDQ provided a slight difference in teachers' responses when describing difficulties in comparison with the existing 5-factor structures of SDQ. Overall, while employing the 5-factor structures of SDQ, teachers' responses could only provide good representation for reliability and validity in representing emotional problems, hyperactive-inattentive problems and conduct problems.

A further interpretation of this finding will be presented in the Discussion section of this chapter. The following section addresses the results for Research Question 5. To reiterate, since this is only an exploratory study of SDQ the original 5 factors (prosocial, emotional, hyperactive-inattentive, conduct and peer problems) were retained in this study to explore further whether gender and age differences exist in teachers' responses in reporting adolescents' emotional and behavioural difficulties using the SDQ. The next section will report this further.

6.4 Age and gender effect of teacher SDQ

In this section, teachers' scores on the SDQ were analysed to see if the ratings of the SDQ scores indicated any age and/or gender differences in their responses. Before testing for gender and age differences of the respective subscales of SDQ, several basic tests were carried out to assess the appropriateness of using parametric statistics. Since this data set was small (samples $\leq$2000), the Shapiro-Wilk test was used instead of the Kolmogorov-Smirnov test. The Shapiro-Wilk test revealed that the score for each subscale was not normally distributed with $p \leq 0.05$. A non-parametric test of Mann-Whitney was therefore used to explore for any gender and age differences in the scores of the 5 subscales of SDQ.

6.4.1. Age differences in emotional and behavioural difficulties as reported by teacher SDQ

The mean scores of teachers' ratings are presented in table 6.14 with the entire sample that compares scale means of the original subscales for two age groups i.e. age range of 11-13 years to 15-16 years. Younger (age 11-13 years) adolescents received significantly higher scores than older (age 14-16 years) adolescents on the subscales

assessing hyperactive-inattentive and peer problems. Older adolescents received significantly higher scores than younger adolescents on subscales assessing prosocial behaviour. Age effects on these subscales when combined did not yield significant differences between the two age groups. Teachers' ratings of their students' emotional problems and conduct problems did not reveal substantial age differences. The effect size (Cohen *d)* of age effects was also considered very small (or negligible) for all teacher-rated scores of SDQ subscales. However, at item level of hyperactive-inattentive problem, the Mann-Whitney t-test found that less reflective (MEAN value: younger group with 0.86 and older group with 0.69) was rated higher for younger adolescents than older adolescents with $p \leq 0.01$. In the peer problems ratings, less popular was rated higher for younger adolescents with $p \leq 0.01$. With the prosocial subscale older adolescents were said to be more considerate, like to share, caring and help out.

Table 6.16 Age differences in adolescent SDQ according to teacher SDQ ratings

	Total sample Mean	Age 11-13 N=139 Mean (SD)	Age 14-16 N=257 Mean (SD)	Effect size *d*	Mann-Whitney U-test Sig (mean)
Total difficulties score	7.60	8.13 (4.11)	7.29 (4.21)	0.20	
Emotional symptoms	1.42	1.35 (1.55)	1.46 (1.77)	0.06	
Conduct problems	0.85	0.99 (1.29)	0.77 (1.12)	0.18	
Hyperactivity-Inattentive	2.78	3.08 (2.12)	2.60 (2.04)	0.23*	Younger adolescents are *less reflective (0.86)***
Peer problems	2.55	2.71(1.10)	2.45 (1.34)	0.21*	Young adolescents are *less popular (0.69)**
Prosocial behaviour	7.03	6.59 (2.21)	7.28 (2.24)	0.11**	Older adolescents are more

					considerate (1.62), likes to shares (1.62)**, caring (1.42)** and *helps out (1.45)**

**p≤0.01; *p≤0.05; NS not significant (Mann-Whitney U-tests). Cohen's effect size (d):0.20= small, 0.50= moderate, 0.80= large.

6.4.2 Gender differences in emotional and behavioural difficulties based on the teachers' SDQ reports.

The mean scores obtained for teachers' ratings are presented in table 6.17, which compares scale means for male and female. Boys received significantly higher scores than girls on the subscales assessing conduct problems, hyperactive-inattentive problems and peer problems. Gender effects on these subscales combined to yield a significantly higher total difficulty scores for male adolescents. Teacher' ratings of their student's emotional symptoms and prosocial behaviour did not reveal substantial gender differences. The effect size (Cohen *d)* of gender effects was also considered very small (or negligible) for all teacher-rated scores of SDQ subscales. However, at item level of Total Difficulties Scale problem, the Mann-Whitney t-test found that Total Difficulties Score was rated higher for males for being restless, distracted, lies, disobedient, less reflective and less popular. Females were rated significantly higher for somatic problems than boys. At the difficulties scale significant findings for gender were observed for conduct problems, hyperactive-inattentive and peer problems. For instance, in the conduct problems, teachers rated males are more disobedient and lying than girls. In the Hyperactive-inattentive problem, teachers rated males are more restless, distracted and less reflective. With peer problems, teachers rated males are less popular than girls.

Table 6.17 Gender differences in adolescent SDQ according to teacher SDQ ratings

	Total sample Mean	Male Mean (SD)	Female Mean (SD)	Effect size *d*	Mann-Whitney U-test Sig (mean)
Total difficulties	7.60	8.17	7.06	0.27**	Males are more

score		(3.84)	(4.44)		restless (0.67)**, distracted(0.74)**, lies (0.13)*, disobedient (0.67)***, not reflective (0.82)* and less popular (0,67)**. Females are somatic (0,26)***
Emotional symptoms	1.42	1.28 (1.58)	1.54 (1.79)	0.15	
Conduct problems	0.85	1.03 (1.25)	0.69 (1.11)	0.29***	Males are more disobedient (0.48)*** and lying (0.13)*
Hyperactivity-Inattentive	2.78	3.18 (2.15)	2.41 (1.94)	0.38***	Males are more restless (0.67)**, distracted (0.74)** and less reflective (0.82)*
Peer problems	2.55	2.68 (1.19)	2.42 (1.32)	0.21*	Males are less popular (0.67)**
Prosocial behaviour	7.03	6.78 (2.33)	7.25 (2.15)	0.21	

***p≤0.001; **p≤0.01; *p≤0.05; NS not significant (Mann-Whitney U-tests). Cohen's effect size (d):0.20= small, 0.50= moderate, 0.80= large.

Both tables (6.16 and 6.17) reveal that overall teachers' ratings were significantly higher for boys with hyperactive-inattentive problems followed by peer problems. The least reports of difficulties based on teachers' reports of conduct problems. A further interpretation of these findings will be discussed later in this section. The overall results highlighted the presence of gender effect on some of the SDQ subscales, which will be considered in the next section when reporting incidence rate of adolescent emotional and behavioural difficulties using the SDQ.

6.5 Incidence rate of EBD of adolescents using parents SDQ report.

Since evidence of gender and age effects were observed for some of the subscales and the total difficulties scores, thresholds based on the entire sample were thought to be insufficient. While the distribution of the five subscales scores determined separately for all three different subgroups of comparable age (11-13 years, 14-16 years) did not reveal sufficient deviations to provide age-specific bandings, such stratified bandings could be provided for the total difficulties scores. Hence the gender-specific bandings were analysed and it is only meaningful to report the actual incidence rate of emotional and behavioural difficulties in Brunei using new norm cut-off points, hence the adjustment will reflect closely the characteristic of the sample of study. Reporting for the incidence of emotional and behavioural difficulties was carried out using the cut-off scores defining the range of emotional and behavioural difficulties as normal, borderline and abnormal. The exact placement of cut-offs was guided by score distributions following closely the suggestion made by Goodman (1997) in his original study. All subscales defining abnormal scores are those that fall within the 90th percentile of the scores, borderline would be scores that range between 80th to 90th percentile and normal group are based on any scores that fall below the 80th percentiles. However, since this study only has 329 teachers reports which contributed to a limited number of discrete scores (example see table 6.18), using the calculated percentiles the targeted percentages could only be approximated closely to at least 10% of the population is falling into the abnormal category, 10% falls in the borderline range and 80% of the population is within the normal category (following suggestions by Goodman, 1997).

Table 6.18 Parents' report of hyperactive-inattentive problems displayed by gender.

Score of SDQ Item (hyperactive-inattentive problem)	Male		Female	
	Percentage	Cumulative percent	Percentage	Cumulative percent
0	8.2	8.2	19.3	19.3
1	16.5	24.7	15.8	35.1
2	17.7	42.4	19.9	55.0
3	18.4	60.8	21.6	**76.0**[(a)]
4	12.0	**72.8**[(a)]	**10.5** [b)]	87.1

5	**13.0** [b)]	86.7	**5.3**[(c)]	92.4
6	**7.6**[(c)]	94.3	**4.1**[(c)]	96.5
7	**1.9**[(c)]	96.2	**1.8**[(c)]	98.2
8	**1.3**[(c)]	97.5	**0.6**[(c)]	98.8
9	**1.3**[(c)]	100	**1.2**[(c)]	100
10	**1.3**[(c)]			
Total				

*notes: [(a)]Indicate the cut-off point for normal range; [(b)] Indicate the cut-off point for borderline; [(c)] Addition of all values Indicate the cut-off point for abnormal range

The new Brunei cut-off points (see table 6.19) based on gender groupings reveal differences in the classification of the mean range for some subscales. Gender specific determination of cut-offs resulted in a range of borderline and abnormal scores reported to be at two-point higher for boys for Hyperactive-inattentive problems. The Total Difficulties Score (TDS) was marked higher by 1 point for boys, whereas the cut-off scores for girls were only higher by 1 point for the prosocial scale. The overall determinant of the cut off scores provided similar threshold across gender for reporting emotional problems, conduct problems and peer problems. Across different genders, the overall determinant of cut off scores provided equivalent thresholds for reporting girls' prosocial problems. However, teachers' reports of boys' hyperactive problems were higher by 1 point and the reports on the prosocial scale was lower by 1 point in comparison with the overall determinant of cut off scores. Overall using these established cut-off scores, it was estimated that approximates for problems categorised as abnormal was reported highest for emotional problems at 11%, prosocial problem at 10.9% followed by hyperactive-inattentive problem at 10.4%, conduct problems at 8.6% and peer problems at 6.1%. The incidence of Total Difficulties Score (TDS) was reported at 10.6% for this study. This incidence rate of emotional and behavioural problems among adolescents must be treated with caution as this finding is only drawn from reports of teachers based on the original version (i.e. existing 5 subscales) of SDQ. An interpretation of these newly proposed cut-off scores and the possible meaning that can be attached to teachers' expectation of adolescents' emotional and behavioural difficulties when using the SDQ will be discussed in the discussion section in comparison with other studies.

Table 6.19 Incidence of psychological difficulties among adolescents in Brunei, reported by teachers reports, based on gender norms

	MALE			FEMALE			Overall Brunei cut-off score
	Normal range	**Border-line**	**Abnormal**	**Normal range**	**Border-line**	**Abnormal**	**Abnormal**
Total difficulties	**0-11**	**12-13**	**14-40**	**0-10**	**11-12**	**13-40**	**13-40**
Exact %	81.6	7.6	10.8	83.6	7.0	9.4	10.6
Emotional	**0-2**	**3**	**4-10**	**0-2**	**3**	**4-10**	**4-10**
Exact %	82.3	9.5	8.2	74.9	11.7	13.4	11
Conduct	**0-1**	**2**	**3-10**	**0-1**	**2**	**3-10**	**3-10**
Exact %	73.4	17.7	8.9	81.9	10.5	7.6	8.2
Hyperactive-inattentive	**0-5**	**6**	**7-10**	**0-3**	**4**	**5-10**	**6-10**
Exact %	86.7	7.6	5.7	76.6	10.5	12.9	10.4
Peer problems	**0-3**	**4**	**5-10**	**0-3**	**4**	**5-10**	**5-10**
Exact %	76.6	17.7	5.7	81,3	12.3	6.4	6.1
Prosocial	**5-10**	**4**	**0-3**	**6-10**	**5**	**0-4**	**0-4**
Exact %	87.3	5.7	7.0	74.8	15.8	9.4	10.9

6.6 Discussion of teachers' reports of SDQ

This is an explorative study ot teachers' reports of school-aged adolescents' (11 to 16 years) emotional and behavioural difficulties in Brunei using the Malay translation of SDQ. The first question explored what the psychometric properties reveal about teachers' responses when using the SDQ. The second question was focused on whether teachers' scores of SDQ differ across age and gender of adolescents. The third question asked the incidence rate of adolescents emotional and behavioural difficulties using the newly identified cut off scores of SDQ. The following section discusses the results of each question in turn.

6.6.1 The psychometric properties of Brunei teachers' reports of the Malay translation of SDQ.

The findings from the present study support the argument that culture and the norms of a society play an important role in influencing teachers' expectation of adolescents' emotional and behavioural development (Nikapota, 2009). This is partly evidenced by the Brunei teachers' responses of SDQ producing a factor structure that varied from the 5-factor scales of the original English version of SDQ. Moreover, only 4 of the factors were considered stable dimensions with more than 3 items loadings on each factor based on Brunei teachers' responses. On the other hand, the 3 factor scales which was offered using the parallel analysis approach only provided a better visual representation of some of the loading of the items, as it only improved to some degree the overall understanding of those proposed broadband scales of the SDQ (i.e externalising problems and prosocial behaviour).

From the 5-factor scales, prosocial items of the SDQ were well recognised by teachers in Brunei as a distinct dimension. This finding is not unexpected because these 5 prosocial items appeared consistently stable across different cultures as a distinct prosocial factor. Evidence supported this prosocial scale when various translations of SDQ were used in other national samples from teachers' reports; in Spain (Rodriguez-Hernandex et al., 2012), China (Du et al., 2008) and Japan (Moriwaki & Kamio, 2014). However, the Brunei findings reported an additional two reverse items that loaded moderately onto this prosocial factor. Although the teacher factor structures of the SDQ were not analysed from samples in Malaysia (Stokes, Mellor, Yeow,

Hapidzal, 2013) and Thailand (Woerner et al, 201), the tendency for reverse items to load onto prosocial factors were more salient in other Asian countries like China (Du, Kou & Coghill, 2008) and Japan (Moriwaki & Kamio, 2014). Hence it is possible that within the Asian region these items had more positive responses from teachers. Hence reversing these items would only reduce the fitness of the factor structure pertaining to difficulty scales.

The way teachers reported emotional items showed a clear divergence from other similar studies. While 5 of the emotional items had good fit in representing this dimension across different cultures, teachers in Brunei only identified 3 items (worries, unhappy and fears) as emotionally related and these items combined well with 2 other peer problems items (solitary and bullied) and produced a dimension that could be described as emotionally-depressed. Closer observation of this analysis indicated that the divergence of these items was possibly due to cultural influences rather than the methodological approach chosen. Through several reviews across different cultures, (Rodriguez-Hernandex et al., 2012; Niclasen et al., 2008; Du, Kou & Coghill, 2008) items of emotional problems appeared stable between different rotation techniques (i.e. varimax versus promax rotations). Similar to this study, both rotations retained the position of loadings of those emotional items (see table 5.7 a & b), however promax rotation provided better support for running the Principal Component Analysis (PCA).

One emotional item of SDQ (i.e. somatic) had a very low loading (0.387) and it loaded onto a different factor with another item with positive responses from teachers describing *having at least one good friend*. Most teachers (87%) rated this item as 'not true' and this could mean that such an issue may either be an irrelevant question to ask teachers in Brunei, or a *somatic* issue might not always be visible to teachers leading to lack of awareness of this difficulty to be recognised. Another item of the emotional scale of SDQ (i.e. being clingy) related well to the way teachers rated difficulties related to being inattentive. This pattern is also seen in teachers' ratings involving Spanish adolescents (Rodriguez-Hernandez et al., 2012).

Teachers in Brunei did not identify a distinct combined hyperactive-inattentive difficulty in their responses to the SDQ. This divergence within a subscale was similar

to SDQ reports by teachers in Spain (Rodriguez-Hernandex et al., 2012) and Italy (Tobia, 2013). Teachers in Brunei and, these teachers in Spain and Italy seemed to be more likely to describe pupils' hyperactive problems as conduct problems. This supports the notion that in some culture, being hyperactive is seen as misbehaving in the class and 'saving face' is more important for some Eastern teachers than allowing such misbehaviour to weaken teacher's authority in class (Moon, 2011). On the other hand, these teachers across different cultures also recognised 3 inattentive items (distracted, inattentive and not reflective) as a distinct dimension of inattentive problems. The tendency for teachers to perceive adolescents' hyperactive problems separately from inattentive problems across these samples was possibly due to the size of the samples which were considered small in comparison to other studies which had larger numbers in their studies (≥ 1000). Additionally Brunei teachers' responses for peer problems had the lowest fit. This observation was also apparent in teachers' samples in China (Du et al., 2008) and Spain (Rodriguez-Hernandex et al., 2012). The poor fit could also be due to sample sizes that were considered small in these countries (n <1900), since other studies, with much larger samples, reported support for the factor structure.

The other proposed 3-factor structure from this current study could not be supported fully for its use to represent the reported emotional and behavioural problems based on teachers report in Brunei at the moment. Although Goodman supported the notion that there are advantages of using the suggested internalising and externalising SDQ subscales for analysis in low risk sample, this was not necessary the case when analysis was carried out with teachers from Brunei. However, these broader scales received some support from exploratory analyses in a study with teacher samples from Belgium (Van Leeuwen, Meerschaert, Bosmans, De Medts, & Braet, 2006). Goodman, Lamping & Ploubidis (2010), examined the SDQ factor structure with data from 18,222 British children and demonstrate that the examination of 5 subscales did show convergent and discriminant validity when predicting to participants with clinical difficulties. This is not surprising since working with low risk samples, it would not always be a clear cut distinction between (for example) behavioural and hyperactive problems or between externalising and prosocial behaviour. Additionally, teachers tend to work with many children and might find it difficult to make such

distinction between externalising and those of prosocial behaviours. This could explain the lack of clear discriminating symptom clusters when working with low risk sample such as this study. However, looking at the visual representation of the items loading on the SDQ, the 3 factor scales offered a better insight into the label of externalising problems (i.e. grouping of hyperactive-inattentive problems and conduct problems), where item 15 distractibility is now fitting together with the broader scale. Generally, both factor structures (i.e. 6 and 3) would need further statistical analysis to compare their statistical goodness of fit. Culturally, some items were not seen or perceived as problems by teachers in Brunei which is similar to studies in some Eastern countries. In addition, this study employed small sample and which could result in less sensitivity in tapping into the distinct difficulties as predicted by the SDQ.

Despite only partial support was found for the teachers' factor structure in this study, the original 5factor scales were evaluated to see how reliable and valid the SDQ would be if teachers' responses to the SDQ continued to be used in reporting emotional and behavioural difficulties of adolescents. Although the factor structure in this study only provided good representation for describing prosocial items, internal reliability estimates supported reasonably well the use of hyperactive-inattentive problems, (0.691) emotional problems (0.686) and conduct problems (0.568) of SDQ. Across other similar studies, these reported internal estimates were still considered at the lowest range compared to most studies carried out in the West. Overall, teachers in Brunei had similar ranges of scores when compared to studies within the Asian (Malaysia, Thailand, China and Japan) region: Hyperactive-inattentive (0.72-0.82); Emotional problems (0.63-0.77) and conduct problems (0.58-0.67) (Stokes et al, 2013; Woerner et al, 2011; Du et al, 2008; Moriwaki et al, 2014).

Across the difficulties score, the peer problems internal estimate was reported to be the weakest in Brunei (0.01). Although other countries similarly said this being the lowest internal estimates, this was more apparent in the Asian region such as Thailand (0.21), Malaysia (0.30) and China (0.48). Despite the lack of internal reliability for some of the SDQ subscale, employing the overall Total Difficulties Score (TDS) of SDQ provided sufficient information about adolescents' difficulties using the SDQ in Brunei. However, item-total correlation highlighted that item 23 "*gets on better with*

adults than with other children" had the lowest correlation (0.017) and removing this item slightly improved the internal reliability of the TDS. Statistics revealed that approximately 80% of teachers rated this question 'true' and somewhat true' when responding to it. Perhaps this response indicated that teachers might feel that this shows that adolescents were confident when dealing with adults (for example teachers). It might be that the teachers, like the parents viewed this question as referring to relationships with younger children instead of same-age adolescents. Since their study did not provide an analysis of the Malay SDQ factor structure, less is known about how teachers in Malaysia responded to that question. This technical aspect serves to highlight the need to look at the translation of the Malay SDQ to see in what ways of the items had actually led to the inconsistencies of reports when used in different cultures.

The final psychometric analysis addresses the research question on the construct validity of the SDQ teacher report. Overall the existing difficulties subscales of SDQ provided good to moderate equivalence to corresponding domains of TRF. Teachers might report that adolescents experiencing emotional problems may also show signs of physical or psychological issues. This pattern was similar to that reported from a study involving Japanese children (Moriwaki & Kamio, 2014). There are relatively few comparison that can be made as other studies have not tested the construct validity of SDQ teacher version. However when it has been done, samples were too young with ages ranging from 4 to 7 years old (Van Leeuwen et al., 2008; Mieloo et al., 2012) and these are therefore not comparable with this study.

As for hyperactive-inattentive subscale of SDQ, it was not surprising to see high correlation of attention problems with TRF. This was because teachers in Brunei were likely to identify more inattentive problems than hyperactive problems among adolescents in Brunei. Additionally, teachers in Brunei tended to view conduct problems of adolescents as delinquent rather than aggressive in nature. But this validity support is not convincingly strong. In contrast, teachers in Japan, considered adolescents' conduct problems to be of a more aggressive nature (Moriwaki & Kamio, 2014). Lastly, teachers' rating of peer problems of SDQ could not be validated with social problems as assessed by the TRF. Drawing from the factor structure and reliability estimates, items of peer problems tended to be viewed

differently from teachers in other cultures. It is recommended that future studies to consider the possibility of using different peer problem items that appear more culturally sensitive to the population of study in particular within the Asian region. Overall, the findings suggest some cultural influence with the way teachers responded to items of SDQ which resulted in a factor structure that partly differed when describing adolescents' difficulties in Brunei. The next section will examine teachers' SDQ scores in relation to any age and gender effects.

6.6.2 Teachers' scores of SDQ: Age and gender differences in emotional and behavioural difficulties.

The 5-factor structures of SDQ were retained in this study to discuss how teachers' scores of SDQ vary with age and gender across different cultures. This study shows that teachers identified significantly more young adolescents with hyperactive-inattentive problems and peer problems. Similarly in China and Japan, teachers thought that younger adolescents were more likely to experience hyperactive-inattentive problems than older ones (Du et al., 2008; Moriwaki et al., 2014). Prosocial behaviour was rated higher for adolescents in Brunei than the UK samples, which corresponded to similar Asian reports of SDQ such as Malaysia and Japan. It is important to note that age differences in previous studies have included a wide age range: minimum age of 6 years to a maximum age of 17years. However in this study the age range was between 11-16 years and it may be less sensitive in capturing significant age effect during the analysis.

Teachers also tended to identify more boys with conduct problems, hyperactive-inattentive problems and peer problem than girls, corresponding closely to reports of teachers in studies across different cultures with most available reports from the West: Spain (Rodriguez-Hernandex et al., 2012), Italy (Tobia et al., 2013) and Australia (Mellor, 2005) and China (Du et al., 2008). However, a Malay-speaking country like Malaysia did not find any gender differences in their teachers' reports (Mellor et al., 2007). A closer inspection of Brunei teachers' responses of the conduct problems suggested that two items in particular contributed to this higher report of conduct problems. With a Mann-Whitney t-test, it was found that disobedient (MEAN: boys with 0.48 and girls with 0.27) and lying (MEAN: boys 0.13 and girls 0.06) were rated

higher for boys than girls with p≤0.05. This suggested that teachers tended to view disobedience and lying behaviours to be more common among boys than girls. Another inspection of hyperactive-inattentive problems showed that the Mann-Whitney t-test identified higher means among boys than among girls for the following items: restless (MEAN: boys with 0.67 and girls 0.43), distracted (MEAN: boys with 0.74 and girls 0.56) and unreflective (MEAN: boys with 0.82 and girls 0.69). Generally, boys are said to be more easily restless, distracted and not reflective in class. As for items of peer problem, the Mann-Whitney t-test was found that being unpopular (MEAN: boys with 0.67 and girls with 0.50) was rated higher for boys than girls with p≤0.05 (see table 6.17). Overall, the fact that Brunei teachers identified more externalising problems among boys supported the notion that teachers are more homogeneous group and that they hold similar views to teachers in other cultures in relation to boys.

6.6.3 The incidence of emotional and behavioural difficulties according to teacher reports on the SDQ.

The data shows that teachers in Brunei rated the behaviour for girls in relation to hyperactive-inattentive problems differently from that of boys since the cut off score is lower by 2 points for girls than boys. In other words, teachers viewed girls as showing more control in relation to these difficulties compared to boys. Hyperactive-inattentive problems are commonly seen as more prevalent among boys than girls. Teachers are also likely to notice boys for acting out and showing aggressive related behaviour. This is partly in evidence in this study, where the factor structure of SDQ revealed that teachers tended to associate boys more with hyperactive problems such as conduct related issues. (see table 6.9). The data showed that there exist some differences between the benchmark of reporting cut-off scores from responses of teachers in Brunei compared to the English version of SDQ. Teachers in Brunei expected adolescents to display lower emotional, conduct problems, hyperactive and total difficulties score compared to the British cut off scores. This suggested that teachers in Brunei see these problems less as a particular issue with adolescents when compared to the British samples (Goodman, 2001).

Table 6.20 only compares the scale mean of the Total Difficulties Score (TDS) from the Brunei community samples with those from Britain, Malaysia and Thailand. Across these countries (including the Brunei teacher report), reporting the TDS provided good and sufficient support from earlier psychometric analysis. The TDS indicated highest ratings from teachers' responses in Thailand. Overall, teachers in Brunei and Malaysia provided almost similar responses on the items ratings for total difficulties score. Closer examination of the item-total correlation (see table 6.13) revealed that the highest correlation appeared to result from 4 items of hyperactive-inattentive problems (restless, distracted, inattentive and unreflective) and 1 item of emotional problems (clingy). However, from table 6.9 it was clear that these hyperactive items were seen by teachers as conduct problems and clingy or emotional was considered as an inattentive problem. Hence we can conclude that teachers in Brunei tend to see more of the hyperactive-inattentive/conduct problem side of adolescents difficulties compared to other types of difficulties when reporting using the SDQ. This is not surprising since teachers are more sensitive to externalising problems that could easily interfere with teaching as compared to those internalising behaviour problems (Lane, 2003).

Table 6.20 Scale means of Total Difficulties Score (TDS): Community samples from Brunei, Britain, Malaysia and Thailand

SDQ	Brunei sample Mean (SD)	British sample Mean (SD)	Malaysian sample Mean (SD)	Thailand sample Mean (SD)
Total difficulties	7.60	6.6	7.26	9.1
	(4.2)	(6.0)	(5.34)	(5.2)

6.7 Conclusions

This chapter has provided some insights into how teachers responded to the Malay translation of SDQ and how this might reflect teachers' views of emotional and behavioural in schools in Brunei. There was a cultural mismatch between some of the items on the SDQ leading to teachers responding differently to certain items on the SDQ when compared to the original British SDQ (Goodman, 2001). There seemed to be some support for the existing five-factor structures of the SDQ when teacher reports were analysed using the Principal Component Analysis (PCA). The PCA did

reduce the observed variables forming a five-factor structure. However, only four of these five subscales had sufficient items loading on them and were considered acceptable dimension describing problems. On the other hand, the suggested 3-factor structure could be the best appropriate factor structure for reporting emotional and behavioural difficulties based on teachers reports of SDQ. More items loaded clearer into this broad 3 -actor structure compared to the narrow 5- factor structure. However, only the posocial and externalising problems subscales demonstrate meaningful information that could be drawn from the overall structure of SDQ. Despite the lack of full support in the SDQ factor structures, the following statistical test revealed that 4 existing subscales (prosocial, emotional problems, hyperactive-inattentive problems and conduct problems) including the Total Difficulties Scores (TDS) produced good to acceptable reliability support for its use in Brunei. Additionally, the continued use of the SDQ in Brunei was also supported by a moderate validity support for almost all subscales between the SDQ and TRF. The peer problem subscale failed to provide support in all the basic psychometric tests when used in this study. Continuing to use the SDQ in this study provided some age and gender effects that were seen to correspond well to other cultures as well. For instance, teachers in Brunei would rate younger groups to display more difficult behaviours compared to older adolescents. This was consistent with the behaviour expected of this age group. Teachers also rated more boys than girls with conduct problems, hyperactive-inattentive and peer problems. Overall, this gender effect of SDQ was also consistent with general findings of teachers' reports using the SDQ in other cultures. The incidence rate was slightly higher in Brunei compared to British samples (www.sdqinfo.com) for problems related to emotional problems and the Total Difficulties Scores (TDS). Some of the cut-off points were reported to be lower compared to the original English version of SDQ, which suggest that teachers in Brunei might view some of the behaviours being assessed by the SDQ differently. However, this does not mean that teachers in Brunei necessarily are more strict towards misbehaviour students than in other cultures. It may simply be due to teachers having different perceptions of difficulties, which are not reflected in the original SDQ. This is suggested to some extent by the factor structure of this SDQ that showed some divergence of the items from its predicted subscale.

While behaviours associated with externalising patterns have been the most frequent reasons for referrals among teachers, internalising problems tend to be under-referred and under-represented in classrooms. The rapid referrals of students with externalising problems, and the slow rate of students being referred for internalising problems warrant attention. Goodman et al (2000) in his study argued that internalising difficulties are best obtained from reports of self-rates, i.e. adolescents self-report. Hence to ensure a better insight into Bruneian adolescents' emotional and behavioural difficulties, the next chapter will explore how the Malay version of the YSR is useful for reporting related problems based on self-reports of adolescents.

6.8 Overview of the convergence between parental and teacher reports based on the new factor structure.

This section will assess the overview of the convergence between parental and teacher reports based on the new factor structure when examined using the Parallel Analysis approach. The analysis of retaining factors this way has suggested the same number of factors (i.e. 3 factors) be retained for both SDQ parents and teachers reports. Although both parents and teachers demonstrate 3 factors on their respective SDQ structure, only 1 factor show similarities on both parents and teachers SDQ (i.e. 11 items). These included the original 5 prosocial items of SDQ plus all 5 reverse items and an addition of item number 23 (better with adults than children) from the peer problem scale. On the other hand, the remaining 2 factors on each SDQ report reflect mixed convergence on how parents and teachers view internalising and externalising problems. With the internalising problems scale, items converge well for only 4 of the emotional items of SDQ between parents and teachers reports. While parents show a better visual representation for all loadings on the emotional scale, surprisingly few additional items pertaining to only hyperactive problems also loaded with this factor defining the factor as internalising problem scale. Only 1 item from peer problem loaded together onto this factor (i.e. *solitary* for parents and *bullied* for teachers). With the externalising problems scale, only 1 item is seen to share similar convergence on both parents and teachers SDQ i.e. *lies* from conduct problem. It seems that teachers have a different representation for items (3 from hyperactive problem and 3 from conduct problems) that tap into this externalising factor scale, whereas the combination of items that tap into the same label of factor for parents

SDQ was less clear. In conclusion, although 3 new factors were identified from this study, convergence between parents and teacher reports were only valid for 1 factor which tap all the positive traits and recognised as prosocial scale. Following this, the other factor (i.e. internalising problem scale) which share a fair convergence on both parents reports best describe those of emotional items only. The final factor (i.e. externalsing problems scale) show no convergence (with exception of only 1 item which load similarly) on both reports and to some degree only the teacher report demonstrated an acceptable combination of items describing this as an externalsing problem scale.

CHAPTER 7
ADOLESCENTS REPORTS OF EMOTIONAL AND BEHAVIOURAL DIFFICULTIES OF ADOLESCENTS IN BRUNEI USING THE (YSR)

7.1 Introduction

This chapter presents the first exploratory study of emotional and behavioural difficulties among adolescents in Brunei as reported by adolescents themselves. It examines reports by adolescents using the Malay translated version of the Youth Self Report (YSR). Unlike the two previous chapters which looked at parents' and teachers' responses of the Strength and Difficulties Questionnaire (SDQ), this chapter evaluates the usefulness of reporting emotional and behavioural difficulties from one of Achenbach's psychological measures, the Youth Self Report (YSR). As mentioned in chapter 1, the Malay version of SDQ for adolescents (self-report) is not currently available. However, several studies highlighted the acceptable concurrent validity between the self-report of SDQ and YSR. Moreover, it has also been argued that YSR is the most popular questionnaire on child and adolescent psychopathology published since the 1970s (Leung & Wong, 2003), yet limited psychometric evidence is available in relation to its usefulness when used in the Asian region. Therefore, a continued effort in exploring the Malay translation of YSR is considered useful.

The available reliability and validity analyses of the YSR provided mixed findings when used across different cultures. Only a few studies carried out used a factor analysis approach (Lambert et al, 2007; O'Keefe et al., 2006). Results suggested that there is more support for the two broad categories (i.e. internalising and externalising problems) over the narrow 8-factor structure (Anxiety/depressed, Somatic problems, Withdrawn, Rule-breaking problems, Aggressive problems, Social issues, Attention problems and Thought problems) of YSR. No existing published study has provided evidence of the psychometric properties of the Malay translation of the YSR for emotional and behavioural problems of adolescents in Malaysia. Hence, this will be the first study to examine the basic psychometric analysis of the Malay translation of YSR when used among adolescents in Brunei, a 'Malay' speaking country like Malaysia.

Only a few studies within the western region have carried out an evaluation of the psychometric report of the YSR and in these studies, there appeared to be a lack of support for the existing 8 factor subscales using the Principal Component Analysis (PCA). For instance, a study from Japan (Kuramoto et al., 2002), U.S. (O'Keefe, 2006), eliminated several items of the YSR to produce a simple factor structure that clearly was different from the existing 8 subscales of YSR. Despite the lack of support for the 8-factor structure, these and several other studies continue to find good reliability estimates for this type of long measure. Additionally, older adolescents are said to provide higher ratings across all difficulty scales. While girls are commonly reported to experience more internalising difficulties, boys are commonly seen to express more externalising difficulties. Some studies also reported different cut off points based on gender in describing the abnormal range. Therefore it is also possible that the Malay translation of YSR might produce different cut off scores compared to the original U.S. version of YSR.

7.2 The present study

This study therefore investigated adolescents' responses of reporting emotional and behavioural difficulties in Brunei using the existing Malay translation of YSR. It explored whether the Malay version of YSR could be used to describe similar difficulties as determined by the original 8 subscales of YSR. It also explored adolescents' responses of the existing 8 subscales of YSR to see whether there exist age and gender differences in their YSR scores. Finally, this study investigated the incidence rate of reported emotional and behavioural difficulties using the existing 8 subscales of YSR.

This chapter focuses on investigating Bruneian adolescents' responses on items of YSR whether items converge or diverge from the original version of YSR, whether any scores might change with age and gender of adolescents, and it Brunei's cut-off scores remain similar or differ from the existing cut-off scores produced by Achenbach (1991).

This chapter addresses the following three research questions:

7. What are the psychometric properties of the adolescents' report on YSR when used in Brunei?
    a. What is the factor structure of adolescents reports' on the YSR?
    b. What is the internal consistency of sub-scales of the adolescents reports' on the YSR
8. Are there any age and gender differences in adolescents' scores of YSR?
9. What is the incidence rate of emotional and behavioural difficulties of adolescents according to adolescents' YSR?

7.2.1 Participants

282 adolescents participated in this study. 720 adolescents were initially invited to participate based on random recruitment through schools, however parental and adolescent permission were only gained for 282. There were slightly more female (53%) than male participants in this adolescents group. Students (age 11 to 16 years old) were recruited from 9 schools through multi-stage sampling from year 7 to 10 (*as described in section 4.3.1 on sampling and recruitment).*

7.2.1.1 Gender differences in adolescents' reports

The rationale for this analysis was to check if the researcher could combine data across respondents for subsequent analyses. Evidence of gender differences revealed that 42 items (44%) showed statistically significant differences in their ratings. i.e. 36 items were rated higher by girls and 6 items were rated higher by boys. The Total Difficulties Score (TDS) of SDQ also indicated statistically significant higher scores from female than male responses as determined by one-way ANOVA ($F(1,280) = 14.97$, $p=0.00$). Although there exist gender differences in the scores between male and female participants, splitting the analysis into two groups (i.e. male and female) would not produce a substantive conclusion. Commonly, a Subject to Item ratio of 10:1 would produce 60% samples with correct factor structure. In this study, the total sample (n=282) would only produce Subject to Item ratio of 3:1, which would only correspond to 10% of correct factor (Costello & Osborne, 2005). Hence following the analysis section, respondents of YSR were considered as one group representing adolescents' responses from Brunei.

Table 7.1 Gender differences in Teacher SDQ for adolescents in Brunei

Item number	Item of YSR	Means		Sig
		Male (n=86 students)	Female (n=278 students)	
1	Acts young	0.58	0.68	0.18
2	Alcohol	0.05	0.03	0.52
3	Argues	0.66	0.76	0.19
4	Fails to Finish	0.69	0.72	0.71
5	Enjoys Little	0.68	0.81	0.12
6	Concentrate	0.79	0.83	0.56
7	Minds off	0.59	0.77	**0.05**
8	Sits Still	0.85	0.95	0.25
9	Dependent	0.57	0.72	**0.04**
10	Lonely	0.44	0.66	**0.01**
11	Confused	0.63	0.69	0.35
12	Cries	0.17	0.73	**0.00**
13	Mean	0.44	0.45	0.84
14	Gay dream	0.52	0.58	0.42
15	Harm-self	0.05	0.08	0.52
16	Demand attention	1.08	0.93	0.08
17	Destroy own	0.35	0.37	0.73
18	Destroy other	0.18	0.17	0.79
19	Disobey Home	0.33	0.32	0.98
20	Disobey School	0.39	0.35	0.58
21	Not get along	0.65	0.56	0.21
22	Not guilt	0.34	0.25	0.13
23	Jealous	0.62	0.77	0.07
24	Break rules	0.45	0.28	**0.01**
25	Fears	0.56	0.94	**0.00**
26	Fear of Schools	0.09	0.10	0.94
27	Fear do bad	0.98	1.15	**0.04**
28	Perfect	1.37	1.23	0.08
29	Unloved	0.39	1.23	0.05
30	Out to get	0.59	0.69	0.14
31	Worthless	0.39	0.56	**0.02**
32	Get hurt	0.71	0.77	0.53
33	Fight	0.27	0.20	0.20

34	Teased	0.35	0.54	**0.01**
35	Bad friends	0.27	0.19	0.19
36	Hears things	0.32	0.31	0.82
37	Impulsive	0.68	0.70	0.77
38	Prefer Alone	0.59	0.77	0.03
39	Lie cheat	0.43	0.45	0.73
40	Nervous	0.39	0.64	**0.00**
41	Twitch	0.30	0.42	0.12
42	Nightmares	0.68	0.83	**0.05**
43	Not liked	0.30	0.45	**0.02**
44	Fearful	0.54	0.83	**0.00**
45	Dizzy	0.46	0.79	**0.00**
46	Guilty	0.56	0.72	**0.03**
47	Tired	0.41	0.71	**0.00**
48	Aches	0.41	0.47	0.38
49	Headache	0.45	0.76	**0.00**
50	Nausea	0.25	0.32	0.27
51	Eye Problem	0.17	0.26	0.14
52	Skin Problem	0.22	0.23	0.56
53	Stomach	0.46	0.68	**0.00**
54	Vomit	0.19	0.23	0.48
55	Attacks	0.36	0.22	**0.02**
56	Picks Skin	0.20	0.16	0.40
57	Poor school	0.84	0.82	0.72
58	Clumsy	0.31	0.38	0.28
59	Prefer Adults	0.89	0.89	0.88
60	Prefers young	0.94	0.85	0.25
61	Wont Talk	0.50	0.42	0.23
62	Repeats Acts	0.49	0.58	0.30
63	Run Away	0.00	0.02	0.10
64	Screams	0.50	0.87	**0.00**
65	Secretive	1.13	1.25	0.13
66	Sees Things	0.31	0.28	0.61
67	Self Conscious	0.69	1.01	**0.00**
68	Sets Fire	0.90	0.01	**0.01**
69	Shy	0.67	1.07	**0.00**
70	Sleepless	0.71	0.84	0.13
71	Inattentive	0.67	0.87	**0.00**
72	Speech Problem	0.23	0.28	0.40
73	Steals at home	0.07	0.02	**0.05**

74	Steals Others	0.02	0.00	0.07
75	Stores up	0.63	0.92	**0.00**
76	Strange Behaviour	0.26	0.29	0.62
77	Strange Ideas	0.27	0.33	0.37
78	Stubborn	0.55	0.84	**0.00**
79	Mood change	0.86	0.99	0.10
80	Suspicious	0.49	0.71	**0.00**
81	Swears	0.48	0.68	**0.01**
82	Think Suicide	0.05	0.16	**0.02**
83	Teases	0.54	0.58	0.62
84	Temper	0.74	1.09	**0.00**
85	Threaten	0.19	0.06	**0.00**
86	Tobacco	0.11	0.01	**0.00**
87	Sleep problem	0..28	0.32	0.54
88	Truant	0.12	0.05	0.06
89	Lacks energy	0.46	0.69	**0.00**
90	sad	0.32	0.54	**0.00**
91	Loud	0.58	0.75	**0.04**
92	Uses drug	0.02	0.00	0.16
93	Withdrawn	0.60	0.61	0.98
94	Worries	0.29	0.50	**0.00**
95	Total Score	48.11	57.65	**0.00**

*Note: values in **bold** indicate significant differences between male and female in their YSR scores of respective items.*

7.3 Psychometric properties of adolescent reports' on the YSR

In this section, brief technical steps outline the choices that were made in exploring the fundamental psychometric properties using the SPSS for MAC 21 (SPSS Inc., 2013). A Principal Component Analysis (PCA) was run to explore the relationships within the group of observed variables, as measured through questions or items of the YSR. This is followed by the report of internal reliability to see whether each subscale of YSR actually reflected a level of consistency in the way adolescents were rating the intended subscales.

7.3.1 The psychometric properties of YSR

7.3.1.1 Principal Component Analysis (PCA) of YSR

Preliminary analysis of the responses at the item level was carried out to assess the pattern of responses and the rate of missing values in the data. Any missing values deliberately left by participants were completely removed from the database prior to analysis, this resulted in 0% missing values and 282 completed adolescents' responses. This study aimed at exploring the data, not to test hypothesis or theory, nor was it intended as a "validation" of instruments. Although the YSR was hypothesised with the predicted 8-factor scales (*Anxious/depressed, withdrawn, somatic, rule-breaking problem, aggressive, social problem, thought problem and attention problems)* in the original study (Achenbach, 1991), here it was used with the assumption that it has no prior hypothesis about factors or patterns of measured variables. This approach was used to explore how a factor structure might emerge from Brunei adolescents' responses to the YSR when the factor analysis was run. Hence, the Exploratory Factor Analysis (EFA) served the purpose in identifying the underlying relationships between measure variables of YSR. The Principal Component Analysis (by default in SPSS) was used as an extraction method, which follows closely the approach applied in related studies. Applying a PCA is recommended as the first step to extract maximum variance from large data set producing smaller number of components (Tabachnick & Fidell, 2007). A varimax rotation was adopted to maximise the orthogonality, interpretability, simplification and the variance of factors, where the factors remained uncorrelated (Khan, 2006). Hence, it is the recommended that the varimax rotation technique is used as a first step in exploring the data set (Yong & Pearce, 2013). Using varimax rotation produce factors that are uncorrelated.

The correlation matric (table 7.2) below indicated that several variables had low correlation coefficient ($r < +/- 0.30$) which indicates a lack of patterned relationships. Moreover the determinant was reported to be at 1.000E-013 (short form in statistics for 0.0000000000001), which was much smaller than the necessary value of 0.00001. Thus indicating that multicollinearity is a problem for these data and suggesting that some items may need to be removed.

Table 7.2. Adolescent YSR correlation matrix for some variables

Correlation	YSR items					
	Acts Young	Alcohol	Argues	Fails to finish	Enjoy Little	Concent-rate
ActsYoung	1.000	-.032	.151	.172	.076	.183
Alcohol	-.032	1.000	-.052	-.109	.098	.071
Argues	.151	-.052	1.000	.271	.100	.216
Fails to finish	.172	-.109	.271	1.000	.116	.222
Enjoys little	.076	.098	.100	.116	1.000	.234
Concen-trate	.183	.071	.216	.222	.234	1.000
Mind off	.086	.100	.095	-.091	.127	.109
Sits still	.136	.086	.164	.132	.059	.262
Dependant	.243	-.012	.198	.233	.055	.293
Lonely	.002	.142	.157	.150	.236	.143
Confused	.256	-.017	.147	.252	.119	.229
Cries	-.066	.102	.145	-.040	.176	.062
Mean	.178	.097	.262	.247	.038	.216
DayDream	.226	.078	.179	.091	.067	.175
HarmSelf	.058	.391	-.008	.013	.125	.020

Note: Truncated sample of variables. The Determinant score is 0.011.

The *Bartlett's Test of Sphericity* (significant level of p<.05) confirms that the YSR measure of adolescents' report however did have patterned relationships amongst the variables (p<.001). Following this, our result of Kaiser-Meyer-Olkin Measure (KMO) of Sampling Adequacy (0.777 i.e. cut –off above .05) and the diagonal element of the Anti-Correlation matrix that has the 'a' superscript (see table 7.3; cut-off above.05), indicated that the YSR test is suitable for Principal Component Analysis (PCA).

Table 7.3 Adolescent YSR Anti-image correlation matrix

Anti-image Correlation	YSR items					
	Acts young	Alcohol	Argues	Fails to finish	Enjoys little	concentrate
Acts young	.760 [a]	-.034	-.054	-.039	-.052	-.010
Alcohol	-.034	-.501 [a]	.089	.160	-.046	-.079
Argues	-.054	.089	.811 [a]	-.138	-.063	-.025
Fails to finish	-.039	-.160	-.138	.809 [a]	-.032	-.039
Enjoys little	-.052	-.046	-.063	-.032	.679 [a]	-.098
concentrate	-.010	-.079	-.025	-.039	-.098	.787 [a]

In determining the number of factors, 3 steps were explored in the analysis. Firstly, the *Total Variance Explained table* (see table 7.4) indicated that as many as 29 factors had Eigenvalues greater than 1 before it was rotated. However the total variance explained could not produce '% of variance' after rotation for each factor. Secondly, the scree plot (figure 7.1) consisted of eigenvalues and data points above the break (i.e. point of inflexion) which were considered valid factors. Considering that our adolescents' responses consisted of more than 200 participants, using this scree test was deemed valid and a horizontal line and a vertical line starting from each end of the curve were drawn and it demonstrated the presence of the 29 factors. The final step using the program called Monte Carlo PCA for Parallel Analysis would generate random results of Eigenvalues which could be compared against the fist Eigenvalues produced from the table 5.4. Based on the assumption that if the first Eigen value is larger than the criterion value from parallel analysis, the factor will be retained (or accepted). As a result, only eight (8) factors were accepted (see table 7.5). However another important result from earlier PCA confirmed the emergence of 29 factors but the SPSS output failed to converge in 25 iterations (convergence =0.063). In other words, the analysis could not extract a factor structure based on adolescents' reports. Another attempt was made with promax rotation and similarly, it failed to converge. Therefore it was not possible to examine the factor structure of this 29-factor Malay translation of YSR. A possible explanation, outlined by Costello and Osborne (2005)

is that failure to converge is exclusively observed in smaller samples with regards to the effects of Subject-to-Item ratio. The sample fell short of the recommendation offered by Costello and Osborne (2005) where this sample only accounted for a 3:1 subject ratio to item and corresponded to only 10% of the sample to produce a correct solution which was considered insufficient. Based on the small ratio of subject to item in this study, the suggested 8 factor structures were not explored since this only corresponded to 10% of the sample assumed to produce correct solution. They also argued that when using an Exploratory Factor Analysis (EFA), the minimum subject ratio to item should be at a minimum of 5:1 to derive a factor solution and anything less than the minimum ratio would increase the percentage of failing to produce a solution (for example a variable ratio of 2:1 would resulted in 30% of analyses failing to converge after 250 iterations). Hence, the small sample size of this study could not produce output for either varimax or promax rotation, which would allow the interpretation of how adolescents had responded when reporting on emotional and behavioural difficulties using the YSR. Since at this stage the study served as an exploratory study, not as hypothesising or theory testing, the 29-factor structures of Malay version of YSR could not be confirmed. Hence the following section will continue with evaluating the exiting 8-factor structures of YSR. Doing so will provide some insights into how reliable the YSR might be when used by adolescents in Brunei to report emotional and behavioural difficulties of adolescents using the existing 8-factor structures as proposed by Achenbach (1991).

Table 7.4 Adolescent YSR Total Variance Explained for extracted factors

	Initial Eigenvalues		Extraction Sums of Squared Loadings	
Component	Total	% of Variance	Total	% of Variance
1	13.244	14.089	13.244	14.089
2	3.976	4.230	3.976	4.230
3	2.923	3.110	2.923	3.110
4	2.898	3.083	2.898	3.083
5	2.767	2.944	2.767	2.944
6	2.322	2.471	2.322	2.471
7	2.038	2.168	2.038	2.168
8	1.999	2.127	1.999	2.127
9	1.871	1.990	1.871	1.990
10	1.751	1.863	1.751	1.863
11	1.727	1.837	1.727	1.837
12	1.697	1.805	1.697	1.805
13	1.672	1.778	1.672	1.778
14	1.568	1.668	1.568	1.668
15	1.552	1.651	1.552	1.651
16	1.534	1.632	1.534	1.632
17	1.453	1.545	1.453	1.545
18	1.408	1.498	1.408	1.498
19	1.402	1.492	1.402	1.492
20	1.310	1.393	1.310	1.393
21	1.295	1.378	1.295	1.378
22	1.255	1.336	1.255	1.336
23	1.219	1.297	1.219	1.297
24	1.189	1.265	1.189	1.265
25	1.170	1.244	1.170	1.244
26	1.143	1.216	1.143	1.216
27	1.079	1.147	1.079	1.147
28	1.062	1.130	1.062	1.130
29	1.049	1.116	1.049	1.116
30	.998	1.061		

Figure 7.1 Scree plot illustrating the five factors

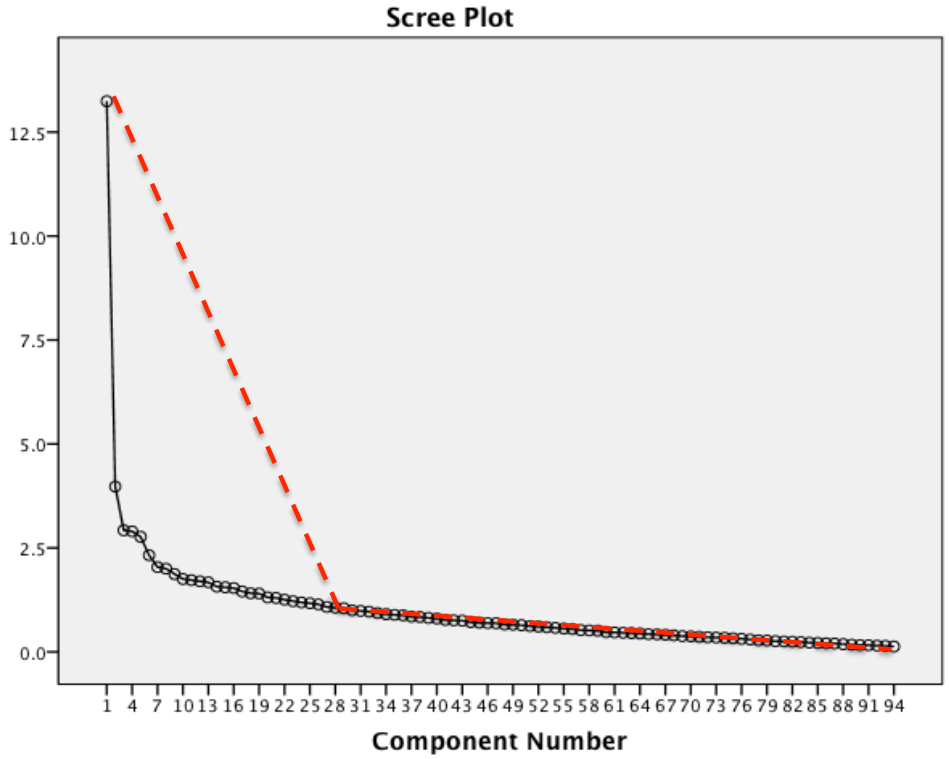


Table 7.5 Comparison of eigenvalues from PCA and criterion values from parallel analysis

Component number	Actual eigenvalue from PCA	Criterion value from parallel analysis	Decision
1	13.244	2.3986	Accept
2	3.976	2.2955	Accept
3	2.923	2.2249	Accept
4	2.898	2.1586	Accept
5	2.767	2.0974	Accept
6	2.322	2.0486	Accept
7	2.038	2.0003	Accept
8	1.999	1.9529	Accept
9	1.871	1.9060	Reject
10	1.751	1.8688	Reject

7.3.1.2 Internal consistency of SDQ subscales.

Internal reliabilities for the existing 8-factor subscale (*Anxiety/depressed, somatic problems, Withdrawn, Rule-breaking problems, Aggressive problems, Social issues, Attention problems* and *Thought problems*) were examined to see whether adolescents in Brunei would show low or high agreement in their ratings of items as expected

within the 8 subscales of YSR. Since the earlier section indicated that the factor solution could not be produced, we would anticipate some low internal reliability to appear from responses provided by the adolescents. George and Mallery (2003) provided the following rules of thumb: " > 0.9 - Excellent, > 0.8 - Good, > 0.7 - Acceptable, > 0.6 - Questionable, > 0.5 - Poor, and < 0.5 - Unacceptable" (p. 231). Similarly, Cicchetti (1994) proposed that a Cronbach's alpha of 0.7 is considered desirable for reporting internal consistency.

Overall, Cronbach's alpha (table 7.6) revealed that adolescents' ratings for all items pertaining to the Total Difficulties Score (TDS) had excellent internal consistency (0.98). Despite the absence of a factor structure for analysis, tests of internal consistency revealed that the 8-factor subscale offered useful information on adolescents EBD. For instance, it was reported that 4 subscales had very good internal consistencies (Aggressive. Anxious/depressed, somatic and *attention*) and the other 4 subscales had acceptable internal consistencies (withdrawn, rule-breaking, social problems and thought problems). Although a few items were analysed to have affected the reliability estimates of some of the YSR subscales, removing the items only improved the Cronbach's alpha minimally.

Table 7.6 Cronbach's alpha coefficients and means (standard deviations) of the YSR.

Subscales	Cronbach's alpha	Means and Standard Deviations	Items whose omission improves alpha	Cronbach's alpha after omission
Total difficulties	0.928	47.92 (19.61)	Perfect	0.929
Anxious/Depressed	0.754	7.88 (4.08)	Perfect	0.783
Withdrawn	0.643	5.62 (2.72)		
Somatic	0.700	4.54 (3.00)	Eye problem & Skin problem	0.710
Rule-breaking problem	0.616	3.09 (2.28)		
Aggressive	0.784	9.11 (4.73)	Demand Attention	0.800

Social Problem	0.688	6.22 (3.30)
Thought Problem	0.632	4.88 (3.17)
Attention Problem	0.701	6.58 (2.98)

However, a longer instrument usually increases the reliability of the test regardless of the test is homogeneous or not (Dennick & Tavakol, 2011). Moreover, previous analysis of YSR (see table 7.6) reported that several variables had low correlation coefficients ($r < +/- 0.30$) which presented a lack of patterned relationships. Although the YSR scores were not normally distributed, analysis using both Pearson and Spearman produced almost similar correlation results of the Item-Total correlation. Pearson product moment correlation reported as many as 70 items (74%) had poor correlations with the TDS. Across those 8-factor scales, most items with poor item-total correlations appeared to come from across all 7-factor scales, except for a few items from anxious/depressed subscale which had poor correlation. The obvious lowest item-total correlation items with only < 0.2 were: alcohol (item 2), demand attention (item19), perfect (item 32), eye problem (item 56d), run away (item 67), sees things (item 70), sets fire (item 72), steals home (item 81), steals others (item 82), tobacco (item 99) and truant (item 101).

Table 7.7 Pearson's correlation and Spearman's correlation: Items with item-total correlation of less than 0.4 (i.e. considered as poor)

Item of YSR*	Correlation with Total Difficulties Score (TDS)	
	Pearson correlation (Sig)	Spearman correlation (sig)
Enjoys little	.282***	.282***
Concentrate	.365***	.357***
Minds off	.326***	.322***
Sits still	.382***	.397***
Dependent	.352***	.372***
Lonely	.349***	.312***
Confused	.390***	.351***
Cries	.337***	.335***

*A total of 70 of 94 items produced poor item-total correlation of less than 0.4

7.3.2 Findings of psychometric properties of the adolescent report YSR

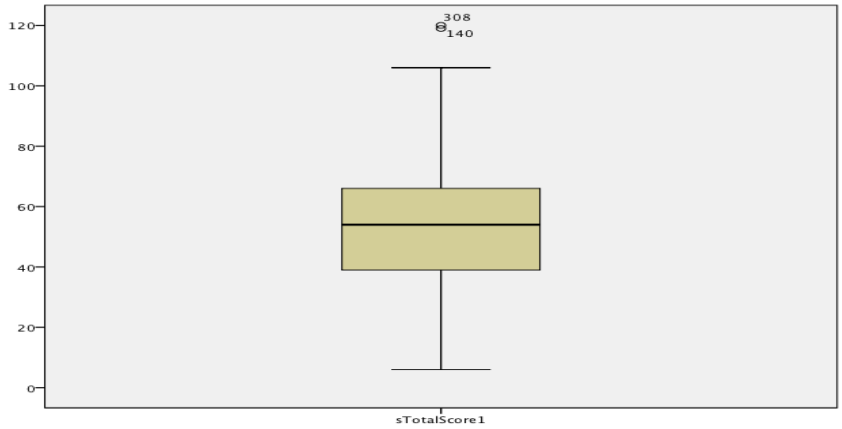
Two basic tests were carried out to evaluate the way adolescents in Brunei responded to the Youth Self Report (YSR) when describing their emotional and behavioural difficulties. The overview of the factor structure stated that as many as 29 factors could be drawn from this analysis, however, rotation was not possible to provide evidence on the items loading of the factor structure. On the other hand, continuing using the existing 8-factor structures of YSR indicated that there was good to acceptable internal consistencies when attempting to describe emotional and behavioural difficulties using the 8 existing subscales of YSR. However, closer inspection of the Item-Total correlation analysis indicated that as many as 70 of 94 items did not correlate well with the overall TDS. A further interpretation of this finding will be discussed later in this chapter. The following section addresses the results of Research Question 8. To reiterate, since this is only an exploratory study of SDQ the original 8 factors (Anxious/Depressed, Withdrawn, Somatic, Rule-breaking problem, aggressive, social problem, thought problem and attention problem) were retained in this study to explore further whether age and gender differences exist in adolescents' responses in reporting their emotional and behavioural difficulties using the SDQ.

7.4 Age and gender effects in adolescents YSR

In this section, adolescents' scores of the YSR were analysed to see if the YSR scores indicated any age and gender differences in the responses. Before testing for gender and age differences of the respective subscales of YSR, several basic tests were carried out to assess the appropriateness of using parametric statistics. Since this data set was small (samples $\leq$2000), the Shapiro-Wilk test was used instead of the Kolmogorov-Smirnov test. The Shapiro-Wilk test revealed that the score for each subscale was not normally distributed with $p \leq 0.05$. However the total scores of YSR indicated that adolescents' scores were just slightly above the non-significant value of $p \geq 0.055$. Closer inspection of other normality factors for TDS reported that there exist some extreme scores as shown on box plot (see figure 7.3). Since all subscales of YSR were not normally distributed and the TDS had some extreme scores, then a

non-parametric test of Mann-Whitney was used to explore for any age and gender differences in the scores of the 8 subscales of YSR.

Figure 7.2 Box-plot showing extreme scores for Total Difficulties Scores (TDS)



7.4.1 Age differences in emotional and behavioural difficulties as reported by adolescents YSR reports

The mean score of adolescents' ratings is presented in table 7.7 with the entire sample and then compares the original scale means for two age groups i.e. Age range of 11-13 years to 15-16 years. Older adolescents (age 14-16 years) had significantly higher scores than younger adolescents (age 11-13 years) on the subscales assessing anxious, rule-breaking problem, social problem and attention problems. The effect size (Cohen *d)* of age effects was considered moderate for those significant differences in those subscales. Age effects on these subscales combined to yield a significantly higher total difficulties score for older adolescents. Adolescents' ratings of their withdrawn, somatic, aggressive and thought problem did not reveal substantial age differences. However, at item level of Total difficulty scale of YSR, the Mann-Whitney U-test found that the Total Difficulties Score (TDS) was rated higher for more jealousy, impulsive, prefers to be alone, nervous self-conscious, stubborn, suspicious and swearing among older adolescents than younger adolescents. Younger adolescent are more likely to have a higher score in seeing things. As for anxious/depressed scale problems, older adolescents rated higher for problems with being fearful to do bad things, being nervous, fearful, self-conscious and worries more than younger adolescents. In relation to rule-breaking problems, older adolescents reported that they were more likely to swear than younger adolescents. Among social problems, older adolescents rated higher for being jealous than younger adolescents. Lastly, Attention

problems were thought to be more difficult for older adolescents with more problems of day dreaming, being impulsive and poor school work than younger adolescents.

Table 7.8 Age effects for each subscale of the YSR

	Total sample N=396 Mean	Age 11-13 N=139 Mean (SD)	Age 14-16 N=257 Mean (SD)	Effect size *d*	Mann-Whitney U-test Sig (mean)
Total difficulties score	53.2	48.2 (19.2)	55.7 (21.7)	0.4***	*Please see notes below*
Anxious/ Depressed	7.89	6.64 (3.51)	8.53 (4.21)	0.5***	Older adolescents are more fearful to do bad (0.10), nervous (0.63), fearful (0.76), self conscious (0.98) and worries (0.47)
Withdrawn	5.61	5.19 (2.86)	5.82 (2.62)	0.2	
Somatic	4.55	4.43 (2.73)	4.61 (3.14)	0.1	
Rule-breaking problem	3.10	2.68 (2.01)	3.31 (2.38)	0.3*	Older adolescents likes to swear more (0.68)
Aggressive	9.11	8.51 (4.58)	9.42(4.79)	0.2	
Social problem	6.22	5.60 (3.06)	6.54(3.39)	0.3*	Older adolescents are more jealous (0.80)
Thought problem	4.88	4.47 (2.77)	5.10 (3.35)	0.2	

Attention Problem	6.58	5.77 (2.83)	7.00 (2.98)	0.4***	Older adolescents day dream (0.62) more, impulsive (0.78) and poor school (0.89)

**p≤0.01; *p≤0.05; NS not significant (Mann-Whitney U-tests). Cohen's effect size (d):0.20= small, 0.50= moderate, 0.80= large.
Notes: For Total Difficulties Score (TDS), older adolescents are said to be more jealous (0.80), Impulsive (0.78), prefers alone (0.76), nervous (0.63), Self conscious (0.98), stubborn (0.82), suspicious (0.73) and swears (0,68) than younger adolescents. Whereas Younger adolescents are said experience seeing things (0.39) than younger adolescents.

7.4.2. Gender differences in emotional and behavioural difficulties based on the adolescents YSR reports

The mean scores obtained for adolescents' ratings in the entire sample is presented in table 7.8, which also reports and compares scale means for male and female. Girls had significantly higher scores than boys on the subscales assessing Anxious/Depressed, Withdrawn, Somatic problems, Aggressive problems, social problems and thought problem with effect size that ranged from moderate to high. Other significant differences were reported to have moderate effect size (Cohen *d*). Gender effects on these subscales combined to yield a significantly higher TDS for female adolescents. Adolescents' rating of their rule-breaking problem and attention problems did not reveal substantial sex differences. However, at item level of total difficulty scale of YSR, the Mann-Whitney U-test found that the Total Difficulties Score (TDS) was higher among females for items assessing in being lonely, teased not liked, cries, fear, worthless, prefers alone, nervous, fearful, dizzy, guilty, tired, stomach, scream, self conscious, shy, inattentive, stores up, stubborn, suspicious, swears, think suicide, temper, lacks energy, sad, loud and worries. The subscale assessing Anxious/Depressed, found that females rated higher for crying, more fear, nervous, fearful, self conscious, think suicide and feeling worried compared to males. Females also rated higher than males for withdrawn problems, in particular on the item of preferring to be alone. As for somatic problem scale, it was rated higher among females for feeling dizzy, tired, headache, and stomach pain. In the Aggressive

problem scale, females rated higher than males for being stubborn, suspicious, temper, threaten and loud. Males on the other hand were only seen to attack more than females. With social problem scale, females were seen to be more dependant, lonely, being teased and feeling not liked, compared to males. Lastly, thought problems were rated higher among females in particular with issues like storing up things.

Table 7.9 Gender effects for each subscale of the YSR

	Total sample N=396 Mean	Boys N=187 Mean (SD)	Girls N=209 Mean (SD)	Effect size *d*	Mann-Whitney U-test (mean)
Total difficulties score	53.2	48.1 (21.2)	57.7 (20.2)	0.5***	*Please see notes below*
Anxious /Depressed	7.89	6.50 (3.55)	9.12 (4.14)	0.7***	Females cries (0.73) more, more fear (0,93), nervous 0.64), fearful (0.83), self conscious (1.01), think suicide (0.16) and worries (0.50)
Withdrawn	5.61	4.96 (2.53)	6.18 (2.76)	0.5***	Females prefer alone (0.77) more than boys
Somatic	4.55	3.69 (2.81)	5.31(2.97)	0.6***	Females are more dizzy (0.79), tired (0.71), headache (0.76) and stomach pain (0.68).
Rule-breaking problem	3.10	3.33 (2.62)	2.89 (1.91)	0.2	
Aggressive	9.11	8.50	9.67(4.4	0.3*	Females screams more

		(5.01)	1)		(0.87), stubborn (0.84), suspicious (0.71), temper (1.09), threaten (0.60) and loud (0.75). Males attacks (0.36) more than females.
Social problem	6.22	5.72 (3.24)	6.66 (3.31)	0.3*	Females are more dependants (0.72), lonely (0.66), teased (0.54) and not liked (0.45)
Thought problem	4.88	4.42 (3.21)	5.29 (3.09)	0.3*	Females like to stores up (0.93) more than males
Attention Problem	6.58	6.26 (2.91)	4.96 (3.03)	0.4	

****p≤0.000; ***p≤0.001; *p≤0.05; NS not significant (Mann-Whitney U-tests). Cohen's effect size (d):0.20= small, 0.50= moderate, 0.80= large.
Notes: For Total Difficulties Score (TDS), Females are more lonely (0.66), teased (0.53), not liked (0.45), cries (0.73), fear (0.94), worthless 0.52), prefers alone (0.77), nervous (0.64), fearful (0.83), dizzy (0.79), Guilty (0.72), tired (0.71), stomach (0,68), scream (0.87), Self conscious (1.01, shy (1.07), inattentive (0.88), stores up (0.93), stubborn (0.84), suspicious (0.77), swears (0.68), Think suicide (0.16), Temper (1.09), lacks energy (0.69), sad (0.54), loud (0.75) and worries (0.50) than males. Males break rule (0.45), attacks (0.36), sets fire (0.09), threaten (0.18) and tobacco (0.11).

7.5 Incidence rate of EBD of adolescents using self-report of YSR.

Since evidence of gender and age effects were observed for some of the subscales and the total difficulties scores, thresholds based on the entire samples were thought to be insufficient. While the distribution of the five subscales scores determined separately for all of the different subgroups of comparable age (11-13 years, 14-16 years) they did not reveal sufficient deviations to provide age-specific bandings, such stratified bandings could only be provided for the total difficulties scores. Hence the gender-specific bandings were analysed and it is only meaningful to report the actual

incidence rate of emotional and behavioural difficulties in Brunei using new norm cut-off points, hence the adjustment will reflect closely the characteristic of the sample of study. Reporting for incidence of emotional and behavioural difficulties was carried using the cut-off scores defining the range of emotional and behavioural difficulties as normal, borderline and abnormal. The exact placement of cut-offs was guided by score distributions following closely the approach made by Achenbach (1991). However, since this study only has 282 adolescents reports which contributed to a limited number of discrete scores (see table 7.9), using the calculated percentiles the targeted percentages could only be approximated closely to at least 2% of the population expected to fall into the abnormal category for all difficulties scales. The presentation of the cut-off scores only reported for those that falls within the abnormal range (i.e. following similar presentation of cut-off scores in other literature review) and will be discussed later with comparison to other similar studies.

Table 7.10 Gender differences in aggression items with the YSR (Cut-off scores for abnormal range)

Score of YSR Item (aggressive)	Male		Female	
	Percentage	Cumulative per cent	Percentage	Cumulative per cent
10	7.5	67.7	12.1	60.4
11	4.5	72.2	6.0	66.4
12	5.3	82.0	9.4	75.8
13	4.5	82.0	7.4	83.2
14	6.0	88.0	4.7	87.9
15	3.0	91.0	2.7	90.6
16	2.3	93.2	3.4	94.0
17	0.8	94.0	1.3	95.3
18	1.5	95.5	-	
19	3.0	98.5	2.0	97.3
20	**0.8**[(c)]	99.2	0.7	98.0
21	**-**	-	**1.3**[(c)]	99.3
23	**0.8**[(c)]	100	**-**	
25			**0.7**[(c)]	1007.5
Total	100			

[(c)] Addition of all values Indicate the cut-off point for abnormal range

The new Brunei cut-off points (see table 7.10) based on gender grouping reveal differences in the abnormal classification of mean ranges for all subscales except for social problems which had similar mean range for the abnormal category for both

boys and girls. Gender specific determination of cut-offs resulted in a range of abnormal scores reported to be at 1 point higher for boys than girls for withdrawn, rule breaking and thought problem, whereas the cut off scores for girls were higher by 2 points for anxious/depressed, somatic and attention, and 1 point higher for aggressive problems. The total difficulties score was marked higher by 3 points for girls. The overall determinant of the cut off scores provided a similar threshold across gender for reporting social problems only. For both genders, the overall determinant of cut off scores provided equivalent threshold for reporting boys' rule breaking and aggressive. Girls' report of withdrawn problems was higher by 1 point in comparison with the overall determinant of cut off scores. Overall using these established cut off scores, it was estimated that the approximate cut off score for problems categorised as abnormal would be at 1.5% for Anxious/depressed problems, 1.5% for withdrawn, 1.8% for somatic problems, for rule breaking at 0.4%, for aggressive problems at 2.2%, for social problems at 1.4%, for thought problems at 2.2%, and at 1.3% for attention problems.

The incidence of Total Difficulties Score (TDS) was reported at 2.0% for this study. This incidence rate of emotional and behavioural problem among adolescents must be treated with caution as this finding only suggests how YSR would represent adolescents based on their self-reports on the existing 8 subscales of YSR. The next section will discuss further the possible reason why adolescents responded the way they did completing the Malay version of YSR and compare this with existing studies.

Table 7.11 Incidence of psychological difficulties among adolescents in Brunei, reported by adolescents reports, based on gender norms

	MALE	FEMALE	Overall Brunei cut-off scores
Percentiles	**98%**	**98%**	**98%**
YSR			
Total difficulties	**102**	**105**	103
Exact %	1.5	2	2.0

Anxious/depressed	**18**	**20**	19
Exact %	0.8	0.7	1.5
Withdrawn	**13**	**13**	12
Exact %	0.8	1.3	1.5
Somatic	**11**	**13**	12
Exact %	0.8	1.3	1.8
Rule-breaking	**11**	**10**	11
Exact %	0.8	2	0.4
Aggressive	**20**	**21**	20
Exact %	1.6	2	2.2
Social Problem	**15**	**15**	15
	0.8	2	1.4
Though Problem	**15**	**14**	13
	1.6	1.4	2.2
Attention problem	**12**	**15**	14
	3.8	0.7	1.8

7.6 Discussion on adolescents' reports of YSR

This is an explorative study on the self-reports of school-aged adolescents' (11 to 16 years old) emotional and behavioural difficulties in Brunei using the Malay translation of YSR. The first question explores what the psychometric properties reveal about adolescents' responses when using the YSR. The second question is whether adolescents' scores of SDQ differ across age and gender of adolescents. The third question asks the incidence rate of adolescents emotional and behavioural difficulties using the newly created cut-off scores of SDQ. The following section discusses the results of each question.

7.6.1 The Psychometric properties of Brunei adolescents' reports of the Malay translation of YSR.

The finding from the present study supported the argument that culture may play an important role in influencing adolescents' self-report of emotional and behavioural development (Nikapota, 2009). This was partly in evidence as the reported variance before rotation indicated that as many as 29 factors might be possible in describing their difficulties when using the YSR, This differed from the 8 factor scales of the original English version of YSR. On the other hand, using the Parallel Analysis, 8 factor scales were found However, earlier result of Eigenvalue could not run the factor structure analysis. It was not possible to derive the pattern of factor structure (as it failed to converge =0.063 in 25 iterations). This was not unexpected since small samples like that in this present study (n=282) would produce 30% chances for failing to converge or produce factors (Costello et al., 2005). Moreover the suggested 8 factor structures were not analysed since the ratio of subject to item (3:1) is very small. It will only capture 10% of correct factor solution and therefore is less useful in interpreting the loading of those items on the YSR.

A similar study in Los Angeles (O'Keefe et al., 2006) with random halves of the total sample led to 459 high school participants assigned for Exploratory Factor Analysis (EFA) which also produced 29 factors; since their samples were almost double than this present study, this could be seen as acceptable. However, they argued that it would be either statistically or theoretically meaningless, indicating that this broad solution (i.e. 29 factors) was clearly not the most parsimonious. Instead, their study eliminated several items and produced a simple structure with only 66 items representing 7 factor structures, which obviously was different from the original YSR version. Another study but with samples across the mental health centres in the Netherlands also found that while some items had very poor loadings, they also reported that only 6 factor structures best described the Dutch samples. Although in both studies their factor structures confirmed the best fit in representing their studies when Confirmatory Factor Analysis (CFA) was used, it is crucial to note that in these studies the used of YSR still did not replicate the existing 8 factor structures of YSR. Moreover, despite that YSR being the most popular questionnaire used with the Asian region (Leung and Wong, 2003) until present no study has provided support for the emergence of the existing 8 factor structures. Perhaps within this Asian region, it is

not impossible to assume that factor analysis of YSR may lack support in producing the existing 8-factor structure, which explains the absence of this analysis in many other studies. Until this is done, it is not possible to draw valid conclusion since this present study will require at least 3 times the sample size to ensure at least 60% of the samples producing a correct factor structure with 0% probability of failing to converge (Costello % Osborne, 2005). In addition, it is also quite common for some studies to report the goodness of fit of YSR using the RMSEA (root-mean-square error of approximation) approach, and they found the YSR model of 8 subscales had converged smoothly for all 23 societies (Ivanova et al., 2007). Without evidence of the EFA approach, they could only assume that the existing 8-factor structure would emerge across the 23 societies. Hence the RMSEA would only then report the goodness of fit for that existing assumption of 8-factor subscales. It is very unlikely for researcher to report how their samples would respond to the use of YSR using the Exploratory Factor Analysis (EFA). Considering that available studies had pointed out the lack of patterned replication across different cultures, therefore understanding how items converge or diverge in describing their emotional and behavioural difficulties using the YSR could provide a meaningful insight on how problems/difficulties might provide similar or different representation than those described by the YSR.

Despite no evidence of a factor structure of YSR in this present study, the existing 8-factor scales were evaluated to see how reliable the YSR was if adolescents' responses continued to be used in reporting emotional and behavioural difficulties. Surprisingly, this study indicated that using the existing 8 factor subscales of difficulties represented good to acceptable internal estimates. In particular, it was seen that adolescents' description of anxious/depressed problems, aggressive problems, attention and somatic problems supported well the homogeneity of the narrow-band syndromes. Corresponding to some studies many of the YSR subscales received good internal estimates except for social problem and withdrawn issues (Song et al., 1994; Izutsu et al., 2005). In another study in L.A. reported the newly proposed simple structure of YSR (O'Keef et al 2006), which was not comparable with this present study. One study in Asia (Vietnam) reported only the broadband and the total difficulties score of YSR but this was not comparable because samples were too young (3-4 years old). However, it could also be argued that long questionnaires like

this YSR tend to have reasonable internal consistencies as longer instruments that usually increase the reliability of the test regardless of whether the test is homogeneous or not (Dennick & Tavakol, 2011). Moreover the item-total correlation indicated that as many as 70 items did not have good interrelatedness with items assessing the total difficulties scores. Therefore it is still inconclusive whether the use of YSR in Brunei sufficiently described well the represents the difficulties as proposed by the existing 8 subscales of YSR.

7.6.2 Adolescents' scores of YSR: Age and gender differences in emotional and behavioural difficulties.

The 8-factor structure of YSR was retained in this study to discuss how adolescents' scores on YSR varied with age and gender across different cultures. This study showed that older adolescents experienced more anxious/depressed and attention problems than younger adolescents. Across different studies, age effect of adolescents' scores of YSR appear to vary from one samples to another. For instance, similar age effect for anxious problems and attention problems might correspond with the scored of adolescents in Spain (Abad et al., 2002), a study of adolescents in Switzerland (Steinhausen et al., 1997) found only age effects with attention problems and in Sweden (Broberg et al., 2001) neither of the problems were significant. In contrast a review across 24 countries reported that older adolescents reported more problems than younger adolescents (Rescorla et al, 2007). It is important to note that where age differences have been found in previous studies, these studies have included a wide age range: minimum age of 6 to a maximum age of 17years. However in this study the age group range was between 11-16 years and it may appear less sensitive in capturing significant age effects.. Closer inspection of the age effect found that responses to anxious problems using the Mann-Whitney t-test reported that older adolescents in Brunei were more concerned with *fear to do bad, easily nervous, fearful, lack of self confidence* and *worries* more than younger adolescents. Similarly, using the Mann-Whitney t-test, older adolescents were said to experience more *day dreaming, being easily impulsive, poor schoolwork* and *failing to finish task.*

This present study also found that girls in Brunei (with moderate to large effect size) reported more problems for Anxious/depressed problems, withdrawn problems, somatic problems and a high Total Problem score. This corresponded closely with a

wider review carried out across 24 societies that similarly found the 3 internalising syndromes and Total scores to be significantly higher among girls (Rescorla et al., 2007). Closer inspection of the items (using Mann-Whitney) found that with Anxious related problems, girls had higher scores for *cries more, has more fear related issues, feeling worthless, self-harm, think about suicide* and *worries easily* than boys. With withdrawn problems, girls were said to *prefer being alone, shy, they lacked energy* and *easily sad*. With somatic complaints, girls reported to experience *dizzy, tired, headache* and *stomach issues*. Overall, girls reports in internalising problems in Brunei were not so different to other girls across different societies.

7.6.3. The incidence of emotional and behavioural difficulties according to adolescents reports on the YSR.

The data showed that girls reported higher in displaying Anxious/Depressed problems, Somatic problems, Aggressive problems and in Attention problems. In other words, girls were seen to express more of these mentioned difficulties in comparison to boys. At this point, it was not clear why the cut-off score for girls were higher in particular for these two types of problems i.e. Aggressive problems and Attention problems. The only possible explanation is that since the sample of this present study was considered very small, these has led to only limited number of discrete scores and consequently the difference between those cut off score may not necessary reflect strong differences in the behaviour between boys and girls.

Brunei's cut-off scores of YSR were reported to be slightly higher than the original US cut off points (Achenbach, 1991). As a result, adolescents in Brunei were said to express more difficulties across the 8 factor scales of YSR. This corresponded with another study that also reported higher cut–off scores for samples from Spain (Sandoval et al., 2006) in comparison with the U.S. samples. However, because the factor structure could not be confirmed, the cut off scores will need further review with much greater samples to draw a more meaningful interpretation of behaviour in relation to the norm of the society. These rates may not present the actual nature of the problem because the reported problem were based on the existing 8 factor scales of YSR which was maintained throughout the report despite the lack of psychometric evidence for some subscales. This only serves to provide information for purpose of comparing results with related studies using the existing 8-factor structures. This is to

highlight that the findings do not reflect a real diagnostic rates and must be treated with caution.

7.7 Conclusions

This chapter has provided some insights into how adolescents responded to the Malay translation of YSR and how this might reflect emotional and behavioural expectation based on adolescents' reports on YSR. Drawing from the above discussion, this Malay version of YSR provided mixed support and is still inconclusive. Although it is tempting to run the 8-factor scale proposed by the parallel analysis using the PCA, statistically it will be less useful and not valid for further interpretation of those items loading onto the 8 factor scales. Doing so means that analysis of factor structure will be based on 90% of wrong factor solution. Clearly there is a need to increase the ratio of participants to item and ensuring at least 60 % of correct factor solution is produce. Many of these items were recognised as sensitive questions and the low or underreporting of these problems may actually have contributed to the low loadings on both factor structure and item interrelatedness to total difficulties scores. In Brunei, while the age effect of YSR scores varied across different studies, gender effect appeared more consistent with more girls appearing to report high internalising related problems.

The cut-off points in Brunei are considered slightly higher than the cut-off scores of the U.S. and the Spanish samples. This does not mean that adolescents in Brunei were significantly different from adolescent in other culture. Instead adolescents' ratings of YSR indicated that some items were less appropriate (low loadings) and possibly adolescents have a different set of what they defined as difficult behaviour.

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CHAPTER 8
GENERAL DISCUSSION ON THE USEFULNESS OF REPORTING EMOTIONAL AND BEHAVIOURAL DIFFICULTIES OF ADOLESCENTS IN BRUNEI USING THE SDQ AND YSR.

8.1 Introduction

The aim of this thesis was to explore the usefulness of using the Malay translation of SDQ and YSR for reporting adolescents' emotional and behavioural difficulties based on responses from their parents, teachers and the adolescents themselves. The three studies reported in chapters 5, 6 and 7 each focused on data from a different group of respondents. The first general objective of this thesis was to explore how parents, teachers and adolescents in Brunei responded to the items of SDQ and YSR. This objective also looks closely at how their responses capture similar descriptions of difficulties (i.e. existing 5 subscales of SDQ and 8 subscales of YSR respectively) that emerged from the original studies previously carried out in Western samples. The second objective was to explore how reliable and valid these Western measures (i.e. SDQ and YSR) are, if parents', teachers' and adolescents' responses continued to be used in reporting emotional and behavioural difficulties of adolescents.

In this present chapter, the general findings are discussed across the three studies of the respondent groups (i.e. parents, teachers and adolescents) to examine consistencies and inconsistencies in findings and to consider the appropriateness of the SDQ and YSR tools for use in Brunei. An outline on the structure of EBD as revealed by the SDQ and YSR will be discussed first; to be followed by a discussion on the psychometric properties, age and gender effects, and the incidence rates of adolescents' EBD, across all three respondents groups. Next limitations of this research, the educational, cultural and methodological implications of this study, future research directions and conclusions of this research, will be discussed before concluding.

8.2 The psychometric properties of the SDQ and the YSR when used in Brunei

8.2.1 Structure in Emotional and Behavioural Difficulties (EBD) as revealed by the SDQ and YSR.

A consistent approach was taken to analyse the data across three studies. Data were subjected to a Principal Component Analysis (PCA) a) identify underlying relationships between variables and b) extract factor structures based on data from each sample. Results showed different factor structures for each respondent group suggesting that parents, teachers and adolescents in Brunei consider emotional and behavioural difficulties differently from Western samples reported in other studies. Using the PCA and parallel analysis offered different answers for retaining factors across parents', teachers' and adolescents' reports. As for the SDQ parents' and teachers' reports, the suggested 3 factors that were identified using parallel analysis was thought to mirror closely the broader internalising, externalising and prosocial subscales on the later version of the SDQ, which was previously evident in a study by Goodman, Lamping and Pioubidis (2010). However, when employed with samples from Brunei, the 3 factor scales did not replicate the proposed 3 SDQ found in other studies (Dickey & Blumberg, 2004; Koskelainen et. al., 2000). To some extent, this study has revealed that only one factor converges well with all similar items tapping into the label of prosocial behaviour across both parent and teacher informant groups. However, the second factor described a problem scale that differs in reports from both parents and teachers. It seems that parents were more likely to identify internalising problems than the teachers, in contrast,, teachers were more likely to identify externalising problems than parents. Such differences are consistent with several studies that found parents likely to identify their child's internal problems, whereas teachers are more sensitive to the children's external problems; particularly as such problems could easily interfere with teaching (Lane, 2003, Goodman, Ford, Simmons, Gatward & Meltzer, 2000). In addition, adolescents' self-reports are seen to provide an additional source of information in the assessment of emotional and behavioural difficulties of adolescents. The initial analysis using the PCA reported as many as 29 factors but they failed to converge and hence no factor structure was created that could be examined. However, it was surprising to see that using the parallel analysis, an 8 factor structure of YSR was suggested. Unfortunately, it was not valid to re-examine the PCA with 8 factors since this only produces 10% of the correct

representation of the factor structure (Costello & Osborne, 2005). Hence these 8 factors of YSR might not necessarily reflect those similar 8 narrow band/subscales of YSR: i) Anxious/Depressed, ii) Withdrawn/Depressed, iii) Somatic Complaints, iv) Social problems, v) Thought Problems, 6) Attention Problems, 7) Rule-Breaking Behaviour, and 8) Aggressive Behaviour).

These differences, which suggest cultural differences in the perception of emotional and behavioural difficulties, were expected from the research studies and their findings included in the literature review presented in Chapter 2. This present study support the emphasis put forward by Woerner et al. (2004) on the importance of exploring the scale properties, such as their factorial structure before evaluating correspondence of their scale means across different studies. This procedure allows us to explore more effectively if the Western designed measures for reporting emotional and behavioural problems actually provide similar or different ways of describing the problems when used in a different (Eastern) culture. This study generally found that parents, teachers and adolescents in Brunei had different ways of describing emotional and behavioural difficulties when using like SDQ and YSR tools that originated from the Western cultures. This cultural difference was also in line with findings from other Asian countries such China (Du et al., 2008) and Thailand (Woerner et al., 2011), where researchers failed to replicate the expected factor structures determined using the same Western-developed measures. This outcome strengthens the claims that items used to describe emotional and behavioural difficulties in Western measuring instruments and tests may not necessarily tap into describing similar difficulties (Nikapota, 2009) as those seen in this present study.

Expectations concerning children's development and behaviour vary across cultures (Johnson Powell & Yamamoto, 1997). As reviewed in chapter 2, culture carries a set of values that dictates the social expectations people must adhere to in order to belong to their social group. These Western-developed measures reflect views on emotional and behavioural expectations that were tailored closely according to their cultural norms in defining acceptable and unacceptable behaviour. Translating those measures into another foreign language. As has happened in this present study, highlighted that describing the same behaviour led to it being interpreted differently in another culture; in other words, it was not perceived as the same. For instance, within the Western

cultures that are known to be highly individualistic, social norms are more likely to encourage independence and prioritise a concern over personal needs than the needs of others (Markus & Kitamaya, 1991; Pomerants & Wand, 2008). As a result, through parents' beliefs or ethnotheories parents would expect adolescents to be emotionally independent earlier than would parents from the Eastern cultures (Harkness & Super, 2006; Winskel et. al., 2013). Parents in the East and most Asian cultures are mostly characterised as collectivist, and they would actually encourage emotional interdependence among adolescents (Markus & Kitamaya, 1991). Eastern emotionally dependent behaviour seems to fit well within the expected Bruneian culture, which explained the deviation of 'clingy' behaviour from the rest of the emotional items in this study. On the other hand, somatic problems were not recognised by teachers as an emotional issues. It was previously believed that teachers might not see these somatic problems due to the non-disruptive behaviour of those students. With such problems Moreover, emotional problems are viewed as socio-moral problem and therefore it is seen as more appropriate to discuss these issuess with family members, elders or spiritual or community leaders (Kirmayer, 2001). Hence these mores could also lead to students not feeling comfortable to share these somatic problems with their teachers.

Another cultural difference is evident in the socialisation process between different societies' expectations in the West and East. In the West, the early independence expectation link closely to a child's socialisation process, which starts quite early compared to those adolescents in the Asian setting (Fuligni, Tseng & Lam, 1999). Therefore, it is reasonable to anticipate that parents and teachers in the West would be collectively more aware of adolescents' peer problems collectively as described in the SDQ measure. This perception differs from the Asian context, where socialisation among adolescents might not be a prime developmental task. Moreover, in cultures fostering independence from parents (Winskel et al., 2013) or when culture exercise social restriction on religious grounds (Kumaraswamy & Suppiah, 2007), it is not surprising to find that parents and teachers would have limited their awareness of adolescents' peer problems as described in the SDQ. This is not to say that peer problems are absent in Asia, but generally it was consistently reported that Asian parents and teachers could not agree on items of peer problems in SDQ as a distinct behavioural difficulty (Du et al., 2008; Woerner et al., 2011). Although adolescents in

Asia were thought to spend more time with parents, this does not necessarily mean that parents are always aware of their children's social problems. Adolescents expressed more difficulty in discussing problems with their parents and tended to be careful and guarded about what they say to their parents (Rhee, Chang, & Rhee, 2003).

The way parents, teachers and adolescents describe externalising problems also appeared to differ between Western and Eastern cultures. As emotional expressiveness is encouraged within the Western societies, it is not surprising to see that adolescents' behavioural difficulties are more physical and verbal in nature. The idea of expressing oneself in Western culture is often viewed as beneficial for mental and physical health (Collins & Steinberg, 2006; Butler et al. 2007). This idea of self-expression is not commonly encouraged in societies holding collectivist beliefs, yet restricting adolescents from expressing their difficulties does not appear to have caused detrimental effects on child outcomes either (Stewart, Bond, Kennard, Ho & Zaman, 2002; Chao, 2001; Leung, Lau & Lam, 1998). This suggests that problems such as showing a temper, fighting and acting out might not necessarily tap into collective difficulties among non-Western societies since refraining from these behaviours is often a reflection of respect and obedience to others, especially the elderly (Weisz, Weiss & Suwanlert, 2006; Kin et al., 1994). Although teachers across different cultures are thought of as a more homogenous group than parents who are from all social classes and educational background, cultural norms are still a significant factor that may impact on teachers' ratings of adolescents' hyperactive-inattentive problems, as was the case in this current study. The findings in this study along with other teachers' reports in Asian societies seem to label hyperactive problems as conduct problems. This different perception is evident in the argument that teachers in the Eastern societies are more likely to report for externalising behaviours (Weisz, Weiss & Suwanlert, 2006).

Retaining the original subscales of the SDQ and YSR only provided moderately reliable estimates. This result was expected because cultural differences may lead to culturally different interpretation of the scale items. . However, longer scales such as YSR seemed to provide a better support for using the subscales thought to be reliable, when used in another culture to describe problems. This supposition does not

necessarily mean that the YSR measure captures Asian representations of emotional and behavioural difficulties, but longer items tend to have improved internal estimates regardless of the scale remains homogenous or not (Kresanov, Tuominen, Piha & Almqvist, 1998). This current study reported that as many as 70 (74%) items had poor correlations with the Total Difficulties Score (TDS); a result contradicted with the report of high reliability of subscales of YSR. Hence, it seems that some items of YSR are redundant as they are testing the same question but in a different guise (Tavakol & Dennick, 2011). Several studies carried out in the West (O'Keefe et al., 2006; De Groot et. al., 1996) have explored the factor structure of YSR. Because the researcher could not confirm the expected structure, several items were removed to produce a simpler factor structure that best represented the difficulties experienced by the adolescents in that study. Although no study within Asian samples has examined the factor structure of YSR, this current study highlights similar suggestion from other studies where refinements can ensure a better cultural fit in future. This point suggests that further research is needed to explore this issue.

It seems that respondents in Brunei as well as in other related Asian studies have higher tendencies for reverse items to be reported mainly as positive traits. These items were reported to have reduced the reliability factor of the difficulty scales, as well as causing poor representation of issues related to conduct, hyperactive and peer problems when the SDQ was employed within the Asian population. This current research seems to suggest that parents, teachers and adolescents in Brunei view of adolescents' emotional and behavioural difficulties as closely resembling Asian values, rather than those coming from Western cultures. It could be argued that Brunei, like Malaysia which its large Malay population, is also characterised by a collectivist culture, as reviewed in chapter 2. It is also important to note that there was a low response rates from all respondents. Altogether, 720 adolescents from 9 different schools were randomly recruited and received their questionnaires together with questionnaires for their parents and teachers, However, for whatever reasons, only 62% of parents gave consent for their child to participate in the study. This study therefore suffers from non-response bias of 38%. The disappointingly low response rate is not uncommon within the Asian cultures. The reluctance to disclose any family issues tie in closely with the stigma associated with mental health problems (Chung & Wong, 2004). These two points could, at least in part, explain low response rate.

8.3 Age and gender effects in responses of parents, teachers and adolescents

This study showed that the direct comparison of ratings of problem behaviour by parents, teachers, and adolescents revealed differences among respondents that were informed by issue of age, gender and type of problem. Parents, teachers and adolescents in Brunei seemed to share a similar perspective when reporting that older adolescents had more emotional problems than did younger adolescents. However, across the different groups of respondents, only adolescents' responses showed a significant age effect with the emotional related problem, in particular the subscale describing the anxious/depressed issue in the YSR. Closer inspection of the relevant 13 items in this subscale indicated that adolescents were significantly more responsive to anxiety-related related problems (*nervous, fearful, self-conscious and worries*) instead of depression-related problems. With the SDQ reports for both parents and teachers there were no significant age effects for older adolescents as expected for two possible reasons. Firstly, it is possible that as adolescents grow older, they increasingly keep their feelings and behaviour to themselves (Verhulst et al., 1992). Secondly, the small number in the sample together with the limited span of 11-16 age group, may appear less sensitive in capturing significant age and gender effects during the analysis. Future research is needed to explore this association further.

Parents' reports of attention and socially related problems were not significant in regarding a child's age, but such a result was not unexpected. These related problems were perceived to be more challenging for adolescents while they are at school. In that environment as students they have to conform to teachers' demand for task related activities, as well as confirming to the norms of social membership groups. Hence, it is expected that teachers' and adolescents' reports will display significant evidence of an age effect. However, it is interesting that the teachers' and adolescents' views differ when reporting attention and social related problems. While teachers reported that this problem was more common among younger adolescents, older adolescents themselves reported they experienced these problems more than members of the younger group. Despite the conflicting reports, both teachers and adolescents' responses remain valid for two reasons. Firstly, closer inspection of those items indicated that using these two separate measures (SDQ and YSR), teachers and

adolescents significantly reported significantly age effects that differed in their description of problems. For instance, teachers members of the younger group as *not reflective* and peer problem were only concerned over *unpopularity* issue. On the other hand, older adolescents would describe problems with *swearing, jealousy, failing to finish homework, impulsiveness and poor schoolwork*. Secondly, reviews of the age effect, as set out in chapter 3, in research using these two separate measures, were found to be consistent across several cultures. Teachers' SDQ reports marked a decline in problems as age increased (Moriwaki et al., 2014; Du et al., 2011), whereas with the YSR, addressed problems seemed to be higher among older adolescents than younger adolescents (van der Ende & Verhulst, 2005; Rescorla et al., 2007).

Despite using two separate measures, parents' reports of emotional problems corresponded well to girls' self-reports of their emotional problems. Evidence of the gender effect was significantly greater for emotional problems in parents' responses about their daughters, and adolescents girls' self-report, than was the evidence from the boys. Parents are generally thought to be better able to identify girls' internalising difficulties when compared to their teachers (Stranger & Lewis, 1993). Boys on the other hand were, in the teachers' reports, commonly reported as experiencing more externalising related problems, but this was only the case for our teacher reports. Conversely, parents and adolescents reported the existence of more conduct problems (with SDQ) and aggressive problems (via the YSR). Careful observation of these two broad subscales revealed that only a small number of the items showed significant gender differences. With the SDQ, parents reported that girls were more likely to have *tantrums* and *be disobedient*. Whereas with the YSR of aggressive problems (17 items), girls reported only 4 items to be significantly higher than boys: *screams, stubborn, suspicious* and *loud.* These problems were thought to be of a less physical type and are more common among girls than boys (Osterman et al., 1998). Hence, drawing from the above discussion, it is recommended that problems should be identified at an item level rather than reporting the general subscale of the problem i.e. conduct problem. Overall, this study highlighted the importance of using the same measure across respondents in order to obtain a transparent crosscheck of the problems. Unfortunately, such an initiative was not possible in this study, due to the absence of the Malay adolescents self-report SDQ. Nevertheless, these age and gender effects highlighted important specific difficulties that otherwise would have wrongly

skewed the report of adolescents' emotional and behavioural difficulties in Brunei. Since this is a new study, it could not explain further why Bruneian respondents reported the way they did.

8.4 Incidence rates of adolescents' emotional and behavioural difficulties based on parents', teachers' and adolescents' cut-off scores

Overall, the cut-off scores between respondents indicated that parents were more likely than the children's teachers to state that their child had EBD than the teachers. This was evidenced in slightly higher cut-off scores across the difficulties' scales coming from parents, rather than teachers. The cut-off points for parents' reports were on a similar level to those reported in the UK (Goodman, 2001), rather than the reported sample from the Asian nation of Thailand (Woerner, et. al., 2011). Conversely, the reported mean of the SDQ was said to be similar to parents' rating in Thailand, which were higher than those of parents in the UK. The inconsistencies with the cut-off points of the means scores in the Brunei parents' reports were the result of the limited number of discrete scores (see in chapter 5), due to the small sample in this study. The calculated percentiles of the targeted percentages could only be approximated closely to at least 10% falling into the abnormal range. This technical move was similarly applied to other studies (Goodman, 2001; Hawes & Dadds, 2003) but their samples were much larger than this current study. For example, the 90th percentile minimum cut-off point for total scores was at 17 points in this present study and in UK samples; whereas in the Thai sample it was at 19 points. Based on such data it is reasonable to suggest specific norms should be adjusted for age and gender in order to be employed in different cultures and in different samples, as previously recommended (Goodman, 2001).

When the effect of gender was studied in the different individual problem domains and for prosocial behaviour, the results were as expected. Parents reporting that girls had more emotional and conduct problems, as indicated by a slightly higher cut-off range than those for boys. However, it is important to note that in this present research, the Brunei parents' benchmark of girls conduct problem was mostly referring to girls' non-physical conduct problems. The percentile cut-off points may need to be examined in future to be of use in the girls' non-physical conduct domains

to see if girls in Brunei are thought to be, or actually are, more aggressive than boys in Brunei; a behavioural scenario reported by both parents and teachers. On the other hand the cut-off points for teachers' reports were lower than for those reports from the UK and in other related studies. However, the reported mean was said to be on a similar range with the reported means of Malaysia (Mellor et al., 2007). The resemblance of mean scores could reflect greater similarity of teacher cultural expectations between the two countries.

When the effect of gender was studied with the different individual problem domains the resulting cut-off scores were slightly different in their level of difficulties. Almost all benchmarks were said to be comparable (including the emotional subscale which was not higher than expected; the only exception was for hyperactive-inattentive problems, outcomes confirmed the general gender effect results. Teachers tended to report more hyperactive problems among boys than girls. Across the difficulty and prosocial symptoms, parents and teachers differed in their reporting of emotional and conduct problem. Parents reported more emotional and conduct problem behaviour than did the teachers. Since this present study used two types of measures for reporting emotional and behavioural difficulties (the SDQ and YSR), it was not possible to provide direct comparisons of the parents' and teachers' cut-off scores using the SDQ, with the adolescents' self-report cut-off scores from the YSR. Yet, adolescents' self-reports in Brunei using the YSR revealed that girls had higher cut-off scores than boys. Such a result suggests that girls were more likely to state that they had internalising related problems such as anxious/depressed problems and somatic problems. Evidently, adolescent girls were more likely to state that they had more externalising related problems such as being aggressive, as well as having more attention problems in comparison to boys. Parents similarly reported more conduct problems among girls than boys which corresponded closely to adolescents' YSR self report.

Overall the prevalence rates in this study for both parents' and teachers' reports using the SDQ were reported higher across all the subscale levels, when compared to the reported British samples (Goodman, 2001) for the estimated low-risk group (ranging from 0.7% to 7.7%). It is expected that patterns vary across cultures and over time even when using different measure as reviewed by Robert et al (1998). However, it is

important to note that in this study, the reported incidence rates across the SDQ and YSR might not necessarily reflect the true nature of the problems in Brunei. As noted earlier, parents and teachers reported different views in describing difficulties when using the SDQ items. As a result, the reported incidence rate of emotional and behavioural problems among adolescents using the SDQ and YSR must be treated with caution. This provision is important because the incidence reports were based on the existing factor structure of these measures; which apparently did not emerge similarly when parents', teachers' and adolescents' reports were analysed using the Principal Component Analysis (PCA) results were diverse rather than similar. Moreover, the age and gender effects only managed to confirm few items that were reported to be significantly different; the effects and it may not necessarily describe well the general problems claimed by the SDQ.

8.5 Limitations and suggestions for future research

The present study was limited in several ways. The first limitation is the small sample size across all the different groups of respondents. A total of 398 parents' reports of SDQ (including 92 responses of CBCL), 329 teachers' reports (including 71 responses of TRF) and 282 adolescents' self-reports using the YSR were aobtained during the research. The responses of parents were at an acceptable minimum sample size suggested in this study (see section 4.3). However, both responses of teachers and adolescents fell short in numbers. This limited the scope for statistical analysis, in particular with adolescents' responses where the YSR was unable to extract the factor structure. In addition, unequal sample sizes for different groups and small effect sizes for available significant findings on some age and gender reports posed some challenge for statistical analysis. It would not be statistically applicable to explore the validity between the SDQ and the Achenbach measures of CBCL and TRF. Given the preliminary nature of the present study, it would be useful in future research to have larger and more balanced sample size of participants.

The other limitation in terms of methodology was that this study only used the Principal Component Analysis (PCA) across all three groups of respondents, due to the absence of personal software, and the lack of skills of the researcher at the time of study to explore with more advanced statistical tests. PCA was used to reduce correlated observed variables to form a smaller set of important independent

composite variables that would enable exploration of the emergence of any trends in the responses from parents, teachers and adolescents. In contrast to many studies, other researchers went on further in exploring the data, by theory testing using the Exploratory Factor Analysis (EFA) and the Confirmatory Factor Analysis (CFA), which was deemed more suited for "validation" of the instrument/measure. As this was the first research conducted using Brunei samples, it can only serve as an exploratory study. Future studies would benefit from using more advanced statistical tests that could relate back to this study later.

It is also important to note that there were some limitations in the process of data collection. The back-to-back translations of both SDQ and YSR questionnaires were originally done by Malaysian professionals. This meant that, few terms of the YSR required rephrasing to suit the local Brunei language, particularly when adolescents were completing the questionnaire. Another term that was identified from both SDQs that might have affected parents' and teachers' responses was the term 'kanak-kanak' used to describe children (the original term used in the English version). While respondents in most studies would recognise the question 'gets on better with adults than children' as a peer problem, respondents in Brunei did not recognise that question as a peer problem. Instead parents and teachers in Brunei would see it as a positive behaviour. The term 'kanak-kanak' seems to denote a much younger age group (11 years below) when being translated to Malay. Other translations in English use a much appropriate term describing similar age group of respondents such as "youth" (in the US) and "other young people" (Australia) instead of "children" (UK). Another related limitation is the use of the Achenbach questionnaires (CBCL and TRF) as a measure of construct validity for the SDQ measures. Again, the Achenbach questionnaires were originally back-to-back translated by Malaysian professionals. Hence, the Malay version of CBCL and TRF would require evidence of reliability and validity before either instrument could be used to test construct validity of the SDQ. Perhaps this issue is something worth exploring by other researchers in future.

During the data collection, two separate measures (SDQ and YSR) were used for gathering information on adolescents EBD. Hence, the results were not comparable across adults respondents using the SDQ, or the YSR adolescents' reports. This lack of comparability limits the validity crosschecks across respondents since some items

did not have corresponding items to compare. A future collaboration in translating the self-report SDQ into the Malay language would make the study more comparable across respondents.

The current results suggest that culture plays a role in some ways when the items were interpreted from the questionnaires. The results differ from those to be expected from the original English version of SDQ (Goodman, 2001) and YSR (Achanbach, 1991). There are some possible reasons for such differences. One is the small sample size in each group. Another is that the limited information obtained regarding local cultural emotional and behavioural difficulties according to what respondents would consider as worrying or difficult to handle within their cultural contexts. In reviewing a wide range of related studies, it appears that no study at present could explain in detail how Bruneian culture has affected the findings of EBD in this study. It would therefore be of value to explore local EBD according to the cultural context to explain how and why items deviate from the analysis of the original proposed factors.

8.6 Educational, Cultural and Methodological implications of this study.

The research reported in this thesis offers researchers and education centres some overview of the basic psychometric properties for employing the Malay versions of SDQ for parents and teachers, and the YSR for adolescents, when used in Brunei. The factor analysis for both measures indicated that parents, teachers and adolescents had interpreted some of the difficulties across subscales somewhat differently from those claimed by SDQ and YSR. This pattern is commonly seen with respondents coming from the Asian regions. Hence, caution is warranted if researchers attempt to continue using these measures without sufficient evidence of psychometric support.

This study also recognised that teachers seemed to be less sensitive in acknowledging adolescents' somatic symptoms as emotional problems. Where it was reported, both parents and adolescents indicated the presence of these symptoms as a clear emotional difficulty when separately rated using the SDQ and YSR. Hence, teachers should not assume the absence of the risk of somatic complaints among students. For instance, a study with Norwegian adolescents (age 13-15 years old), found that adolescents who reported receiving some support from teachers had also displayed a decreased risk in their somatic complaints. Such finding however was more evident among girls than

boys. Nevertheless, teachers creating more awareness by involving other peer support in addressing this issue have also been shown to reduce the risk of this somatic problem for both genders

Another educational implication of this study revealed that parents might not have reported hyperactive behaviour problems as 'clear difficulties'. However, teachers definitely identified these problems as overt difficulties and were likely to label them as misbehaviour. When hyperactivity is presented as a common problem in school by teachers and not by parents at home, then possibly teachers need to consider what school factors or teacher factors may have contributed to this problem among adolescents. Moreover, additional information collected from both parents and teachers confirmed that none of those students who participated in this study had any formal referral for emotional and behavioural problems This outcome could possibly suggest that teachers' observations of this so-called 'hyperactive' problem among adolescents may actually represent normal misbehaviour in class that most teachers find troublesome. This is supported by a sample in an Eastern study (Moon, 2011), which found that Korean parents would see hyperactive-like behaviour as a result of poor parenting, whereas Korean teachers saw such misbehaviour as teacher's difficulties in disciplining the child and those teachers would not want students' misbehaviour to weaken the teachers' authority in class. As a result, Korean teachers may not want to admit to any teacher factors that might have led to students' behaviour problems in class.

Another important educational implication of this study highlights the importance of parents and teachers to be more mindful of the type of concerns or difficulties experienced by adolescents. This study underscores the importance of exploring the items of the general scale of difficulties instead of merely adopting the foreign measures and drawing claims of adolescents' difficulties and development when used in another culture. Employing assessment tools for identifying adolescents with emotional and behavioural problems has educational implications which need to be considered. A measure like SDQ has wide potential in terms of social acceptance among parents and teachers because of its brevity. SDQ has also been used not only as a one- time cross-sectional research tool, but also in some studies (Ford et al., 2012; Kolpin, 2014) where SDQ has shown to be useful in providing teachers and

parents with feedback on an individual's progress when receiving interventions or programmes and counselling. In particular, with the SDQ, the strength-oriented items were included to make the measure more acceptable to respondents and emphasise desirable traits rather than to focus solely on deficits, thereby increasing the acceptability of the SDQ in a community sample.

Another cultural implication is evident in some SDQ items that elicited different responses from parents and teachers in Brunei. In the previous discussions in chapters 5 and 6, it was argued that a possible translation error might have caused parents and teachers to respond more positively instead of tapping into the expected negative traits. This technical aspect serves to highlight the need to look into the translation of the Malay SDQ to see in what ways the items had actually led to the inconsistencies of reports because the meaning of a particular term was interpreted differently.

There are also some implications to consider for parents and adolescents themselves. As for parents, although they did not identify attention problems among adolescents, this does not mean that parents should be less attentive to adolescents' difficulties. This is because when using the YSR, adolescents reported problems with day dreaming, impulsiveness and poor attention to their school work. Although these problems seemed to be more important at school due, to the levels attention demand expected of them, parents' lack of awareness could worsen the adolescents' attention problem across other contexts. It is also important to note that parents were less likely to see clingy behaviour as emotional problems,. However, parents suggested that adolescents who are clingy would also experience being picked by others (bullied), as suggested by the loadings of these two items together in one of those factor structures.

Although this study could not produce the factor structure based on adolescents' responses to the YSR, few implications could be drawn from this study. The high evidence of internal consistencies from the eight-factor subscales of YSR do not necessarily reflect that as a single group, adolescents are all in high agreement describing the items determined by the subscales of YSR. As previously highlighted, there were as many as 70 of 96 items describing problems of adolescents that had poor item-total correlation. A closer inspection of the items on the YSR indicated that most of the externalising problems described items that were less physical in nature.

Hence, it is not surprising to observe that girls were more likely to identify with such behaviour, which led to them being described as having more problems informed by aggression than boys. Some items on the scale might need refinement to ensure it reflects good reliability and validity in describing the problems experienced by adolescents when the scale was used in different culture.

The cut-off scores established in this study provided an insight into the implications of reporting EBD. The high or low ranges of cut-off score were merely seen as the results of the way parents and teachers were reporting the problems. A high number of reported difficulties would result in a high cut-off score. This simply means that respondents were more likely to state that they had seen more difficulties. Hence, it may be less useful to compare prevalence rates across different issues/behaviours studies as these would be based on different sets of cut-off scores which are affected by the norms of the culture.

This study incorporated responses across parents, teachers and adolescents. The reports from each other were helpful in informing us how a particular behaviour may be seen or understood differently across different respondents groups, even within the same culture. This study only provided partial triangulation data to confirm some of the age and gender differences in the reports of parents, teachers and adolescents. However, disparities are to be expected because adolescents may behave differently in different contexts, such as. home and school). It would be useful if a similar version of the instruments were used in future when looking into crosschecking the reports across different respondents. In particular, it would be helpful if the Malay version of SDQ is made available for adolescents self-reporting in the near future. The explorations of the factor structure of the SDQ and YSR are well advanced in most Western samples, it would therefore be appropriate and timely to do a similar investigations with more Asian samples.

Finally, the findings of this study have some practical use in settings with children in school as well as in clinical settings. The SDQ and YSR serve as potential screening tools for recognising those with emotional and behavioural difficulties in larger populations rather than as diagnostic instruments for use in clinical settings. SDQ and YSR could however add additional value when screening high-risk children. When

used with children in school, using measure like SDQ and YSR should take into consideration the danger of labelling them with EBD when their behaviour falls within the normal range of misbehaving. This study supports the retention of the 5-factor structure of the SDQ when the assessment involves young people from the clinical settings. This provision suggests that in low-risk, epidemiological sample (i.e. school children) using the 5 factor scales may not necessarily tap into all distinct aspects of child mental health. In view of this, the 3 factor scales of SDQ seems to be more appropriate for use with adolescents in school. However, only some of the subscales of SDQ effectively describe adolescents' difficulties. For instance, the prosocial subscale and internalising subscale are more useful for capturing those difficulties when reports come from parents; whereas the prosocial subscale and externalising subscale are more useful for capturing those difficulties when reports come from the teachers.

8.7 Conclusions

This thesis considered in detail Bruneian parents', teachers' and adolescents' reports of Emotional and Behavioural Difficulties (EBD) among adolescents (age 11-16 years old). The responses provided by the three different groups of participants have contributed to our understanding in several ways. Firstly, when comparing across groups of different respondents in Brunei, parents' reports differed more in their interpretation of EBD than teachers' reports. Secondly, although this study could not identify a factor structure based on the adolescents' responses to YSR, some interesting results have emerged. There is no doubt more work needs to be done with larger samples and for refinements to be made to ensure a better cultural fit as indicated by the psychometric analyses for both SDQ and YSR.

Overall, the analysis of SDQ managed to provide some support for its use within the Brunei culture. The statistical tests indicated that reporting EBD by using some of the existing subscales of SDQ could be useful within the Brunei context; with the exception of the peer problem subscale). Similarly, the YSR measure yielding the adolescents' self-reports using the existing eight-factor subscales could still offer some reliability support for its use when reporting EBD in Brunei. The use of SDQ and YSR indicated some age and gender effects that were considered consistent with

most studies carried out in other cultures. However, the range of cut-off scores established in this study for both SDQ and YSR vary slightly across several subscales when compared to other related studies. All these reports are important considering that no other research has carried out a similar investigation with a Brunei population. In addition to the suggestion for investigating similar reports using larger samples with an improved statistical approach, the next research step should consider identifying the different types of adolescents' difficulties that are culturally sensitive to the respondents. This initiative will add valuable insight into why reports might vary in comparison to other cultures. It is hoped that this thesis has given direction towards enhancing our understanding on the possible role of cultural values that may result in some behaviours being seen differently in different cultures.

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APPENDICES

Appendix A

Goodman, Robert <robert.goodman@kcl.ac.uk>
Mon 01/10/2012, 20:00
Siti Norhedayah ABDUL LATIF <S.Abdul-Latif@sms.ed.ac.uk>

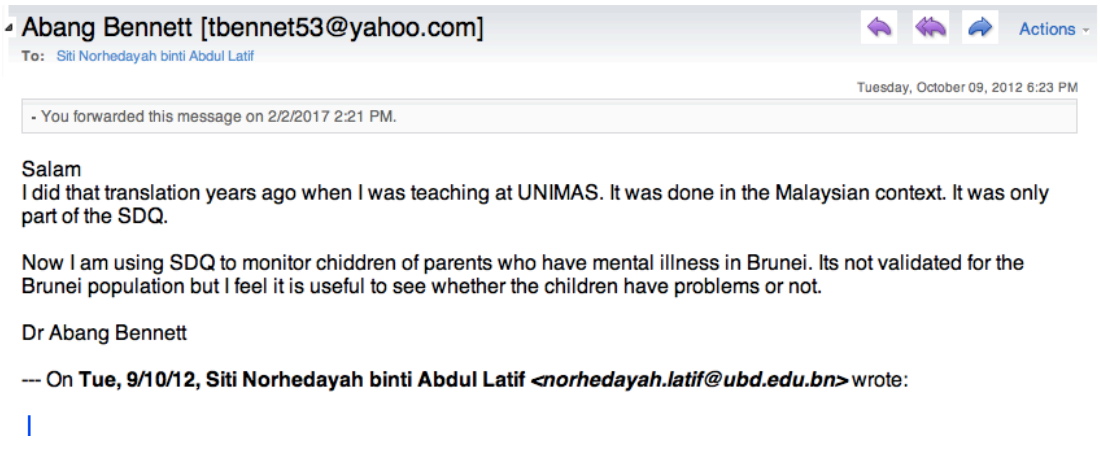
Reply all

Inbox

You forwarded this message on 02/02/2017 03:28

Dear Siti - the SDQ is a copyright measure and it would be a serious breach of intellectual property rights and of your own University's PhD regulations for you to set about "adapting your SDQ tool for self-rated measure" without the permission of the copyright holder, and you do not have my permission. We need to be involved in all translations of the SDQ and we currently have a substantial backlog of work (partly due to the illness of a key team member) with the result that we are not authorising any further translation work until we have caught up with our backlog. I do not know how long that will be and I therefore suggest you look for an alternative to the SDQ.
Best wishes
Robert

Appendix B



Abang Bennett [tbennet53@yahoo.com]
To: Siti Norhedayah binti Abdul Latif

Actions

Tuesday, October 09, 2012 6:23 PM

- You forwarded this message on 2/2/2017 2:21 PM.

Salam
I did that translation years ago when I was teaching at UNIMAS. It was done in the Malaysian context. It was only part of the SDQ.

Now I am using SDQ to monitor chiddren of parents who have mental illness in Brunei. Its not validated for the Brunei population but I feel it is useful to see whether the children have problems or not.

Dr Abang Bennett

--- On **Tue, 9/10/12, Siti Norhedayah binti Abdul Latif *<norhedayah.latif@ubd.edu.bn>*** wrote:

Appendix C

جباتن سكولة ٢
كمنترين فنديديقن
نكارا برونـي دارالسلام

TELEPHONE : 2230513/511
FACSIMILE : 2230515

JABATAN SEKOLAH-SEKOLAH
BLOK 2 J, KONDOMINIUM
ONG SUM PING, BSB BB1311
NEGARA BRUNEI DARUSSALAM

DEPARTMENT OF SCHOOLS
MINISTRY OF EDUCATION BB3510
BRUNEI DARUSSALAM

Rujukan Kami :
Our Reference KP/DS/19:3

20 Safar 1434
03 Januari 2013

Yang Mulia,
Dayang Siti Norhedayah binti Abdul Latif
Lot 7672, No. 2, Spg 106-62-4,
Jalan Pandan Tujoh, Kampong Pandan,
Kuala Belait KA2931
Negara Brunei Darussalam

KEBENARAN UNTUK MENGUMPUL BAHAN KAJI SELIDIK DI SEKOLAH-SEKOLAH MENENGAH KERAJAAN DI BRUNEI DARUSSALAM

Dengan hormat sukacita merujuk surat berpengertian sendiri yang bertarikh 07 November 2012 mengenai perkara di atas.

Sehubungan itu, pihak Jabatan Sekolah-Sekolah **tiada halangan dan membenarkan** Dayang Siti Norhedayah binti Abdul Latif, K/P : 00-288199 (Kuning), Pensyarah di Universiti Brunei Darussalam untuk menjalankan penyelidikan peringkat PhD di semua Maktab / Sekolah Menengah dan Pusat Tingkatan Enam, Jabatan Sekolah-Sekolah pada bulan Januari - Mac 2013, Jun / Julai 2013 hingga hujung tahun.

Oleh yang demikian, pihak Jabatan Sekolah-Sekolah dan Pengetua-Pengetua akan memberikan kerjasama dan bantuan yang diperlukan oleh Dayang Siti Norhedayah untuk menjalankan penyelidikan di atas.

Untuk makluman, hasil dapatan yang diperolehi oleh Dayang nanti hendaklah dihadapkan kepada **Pengarah Sekolah-Sekolah (U.P. : Ketua Unit Latihan dan Perkembangan Staf).**

Sekian disampaikan. Terima Kasih.

Wassalam.

PULG1

"Berjimat Tenaga Amalan Mulia"

(AWANG HAJI KASSIM BIN MOHAMMAD YASSIN)
Pmk. Pengarah Sekolah-Sekolah
Jabatan Sekolah-Sekolah
Kementerian Pendidikan
Negara Brunei Darussalam

Sk :

PTKK (Menengah)
PP (Menengah)
Pengetua Matab Sains Paduka Seri Begawan Sultan
Pengetua Maktab Sultan Omar Ali Saifuddien
Pengetua Sekolah Tinggi Perempuan Raja Isteri
Pengetua Sekolah Menengah Sultan Muhammad Jamalul Alam
Pengetua Sekolah Menengah Menglait
Pengetua Sekolah Menengah Sultan Hassan, Bangar
Pengetua Sekolah Menengah Berakas
Pengetua Sekolah Menengah Pengiran Isteri Hajah Mariam, Serasa
Pengetua Sekolah Menengah Pengiran Anak Puteri Hajah Masna
Pengetua Sekolah Menengah Sultan Sharif Ali
Pengetua Sekolah Menengah Sayyidina Abu Bakar
Pengetua Sekolah Menengah Pehin Datu Seri Maharaja, Mentiri
Pengetua Sekolah Menengah Lambak Kiri
Pengetua Sekolah Menengah Sayyidina Umar Al-Khattab
Pengetua Sekolah Menengah Awang Semaun
Pengetua Sekolah Menengah Sayyidina Hasan
Pengetua Sekolah Menengah Sayyidina Husain
Pengetua Sekolah Menengah Rimba
Pengetua Sekolah Menengah Rimba II
Pengetua Sekolah Menengah Masin
Pengetua Sekolah Menengah Muda Hashim
Pengetua Sekolah Menengah Sufri Bolkiah
Pengetua Sekolah Menengah Raja Isteri Pengiran Anak Saleha
Pengetua Sekolah Menengah Sayyidina Othman
Pengetua Sekolah Menengah Tanjong Maya
Pengetua Maktab Anthony Abell
Pengetua Sekolah Menengah Perdana Wazir
Pengetua Sekolah Menengah Pengiran Jaya Negara Pengiran Haji Abu Bakar
Pengetua Sekolah Menengah Pengiran Anak Puteri Hajah Rashidah Sa'adatul Bolkiah
Pengetua Sekolah Menengah Sayyidina Ali
Pengetua Maktab Duli Pengiran Muda Al Muhtadee Billah
Pengetua Pusat Tingkatan Enam Meragang
Pengetua Pusat Tingkatan Enam Katok
Pengetua Pusat Tingkatan Enam Tutong

PULG1

Appendix D

Participant Information Sheet For Parents

You are invited to take part in a study as part of my research at the University of Edinburgh, Moray House School of Education in the UK. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information.

Thank you for reading this.

Who will conduct the research?

Researcher's name: Siti Norhedayah Bte Abdul Latif, who is currently a PhD candidate at the University of Edinburgh, UK.

Title of the Research

Evaluation of the Malay version of Strength and Difficulties Questionnaires: Psychometric properties and potential as a screening tool for adolescents in Brunei with emotional and behavioural problems.

What is the aim of the research?

The main aim of this research is to evaluate the psychometric properties of the Strength and Difficulties Questionnaires (SDQ) of the Malay version and to report the prevalence rate of the emotional and behavioural problems among adolescents in Brunei Darussalam. A related aim of this study is to provide statistical evidence for stakeholders and policy makers in addressing the local context regarding the increasing number of adolescents who are suffering from emotional and behavioural problems in Brunei. Moreover, this research will provide international evidence on the utilisation of the standardised assessment tool for identifying emotional and behavioural problems within the context of Brunei.

Why have I been chosen?

You have been randomly chosen to participate in this research by the researcher. Your report will be valuable in helping me to understand the nature of emotional and behavioural problems among adolescents as well as assist me in evaluating the assessment tool.

What would I be asked to do if I took part?

You will be required to answer the questionnaire on assessing the emotional and behavioural problems of the students who are also randomly selected. Please give

your answers on the basis of the child's behavior over the last six months or this school year.

What happens to the data collected?

The data will be keyed into a SPSS programme. All the data will be analysed and studied looking at the statistical report of the findings.

How is confidentiality maintained?

The researcher will maintain confidentiality of all the participants' data and no third party will be involved. The names of all participants will be rendered anonymous. The data and results obtained from the research will only be used in the way(s) for which consent has been given; an important part of the Data Protection rules for researchers.

What happen if I do not want to take part or if I change my mind?

It is up to you to decide whether or not to take part. However, this is voluntary research undertaken to help me provide statistical evidence on the general well-being of adolescent students in Brunei.

Where will the research be conducted?

Participant will fill in the questionnaire at his/her own free time and place. However, please submit this form as soon as possible once you have completed it.

Will the outcomes of the research be published?

If the research is to be published, a letter informing you of this will be sent in advance. The names of all participants will be disguised, as will the name of the school.

If you have any queries regarding this study please contact Siti Norhedayah on +6738816896 or S.Abdul-Latif@sms.ed.ac.uk

Appendix E

Consent Form for Participants Taking Part in Student Research Project

Title of Project: Evaluation of the Malay version of Strength and Difficulties Questionnaires: Psychometric properties and potential as a screening tool for adolescents in Brunei Darussalam with emotional and behavioural problems.

Name of Researcher BLOCK LETTERS: SITI NORHEDAYAH ABDUL LATIF

School: Moray House School of Education, University of Edinburgh.

Participant (volunteer)

Please read this carefully and if you are happy to proceed, sign below.

The researcher has given me a copy of the information sheet, which I have read and understood. The information sheet explains the nature of the research and what I would be asked to do as a participant. I understand that the research is for a student project and that the confidentiality of the information I provide will be safeguarded unless subject to any legal requirements. S/he has discussed the contents of the information sheet with me and given me the opportunity to ask questions about it.

I agree to take part in this research and I understand that I am free to withdraw at any time without giving any reason.

Please check one:

_____ I ***give my consent*** for my teen to participate in the questionnaire.

_____ I ***do not give my consent*** for my teen to participate in the questionnaire.

_____

Adolescent's Name

_____

Parent/Guardian's Name

_____

_____

Parent/Guardian's Signature Date

Appendix F

Participant Information Sheet For Teachers

You are invited to take part in a study as part of my research at the University of Edinburgh, Moray House School of Education in the UK. Before you make your decision it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information.

Thank you for reading this.

Who will conduct the research?

Researcher's name: Siti Norhedayah Bte Abdul Latif, who is currently a PhD candidate at The University of Edinburgh, UK.

Title of the Research

Evaluation of the Malay version of Strength and Difficulties Questionnaires: Psychometric properties and potential as a screening tool for adolescent in Brunei with emotional and behavioural problems.

What is the aim of the research?

The main aim of this research is to evaluate the psychometric properties of the Strength and Difficulties Questionnaires (SDQ) of the Malay version and to report for the prevalence rate of the emotional and behavioural problems among adolescents in Brunei Darussalam. A related aim(x) of this study is to provide statistical evidence for stakeholders and policy makers in addressing the local context on increasing number of adolescents who are suffering from emotional and behavioural problems in Brunei. Moreover, this research will provide international evidence on the utilisation of the standardised assessment tool for identifying emotional and behavioural problems within the context of Brunei.

Why have I been chosen?

You have been randomly chosen to participate in this research by the researcher. Your report is considered valuable in helping me to understand the nature of emotional and behavioural problems among adolescents as well as assist me in evaluating the assessment tool.

What would I be asked to do if I took part?

You will be required to answer the questionnaire on assessing the emotional and behavioural problems of the students who are also randomly selected. Please give your answers on the basis of the child's behaviour over the last six months or this school year.

What happen to the data collected?

The data will be keyed into a SPSS program. All the data will be analysed and studied looking at the statistical report of the findings.

How is confidentiality maintained?

The researcher will maintain confidentiality of all the participants' data and no third party will be involved. The names of all participants will be rendered anonymous. The data and results obtained from the research will only be used in the way(s) for which consent has been given; an important part of the Data Protection rules for researchers.

What happen if I do not want to take part or if I change my mind?

It is up to you to decide whether or not to take part. However, this is voluntary research undertaken to help me provide statistical evidence on the general well-being of the adolescent students in Brunei.

Where will the research be conducted?

Participant will fill in the questionnaire at his/her own free time and place. However, please submit this form as soon as possible once you have completed it.

Will the outcomes of the research be published?

If the research is to be published, a letter informing you regarding it will be sent in advance. All the names of the participant will be disguised, as will the name of the school.

If you have any queries regarding this study please contact Siti Norhedayah on +6738816896 or S.Abdul-Latif@sms.ed.ac.uk

Appendix G

Consent Form for Teachers Taking Part in Student Research Project

Title of Project: Evaluation of the Malay version of Strength and Difficulties Questionnaires: Psychometric properties and potential as a screening tool for adolescent in Brunei Darussalam with emotional and behavioural problems.

Name of Researcher BLOCK LETTERS: SITI NORHEDAYAH ABDUL LATIF

School: Moray House School of Education, University of Edinburgh.

Participant (volunteer)

Please read this carefully and if you are happy to proceed, sign below.

The researcher has given me a copy of the information sheet, which I have read and understood. The information sheet explains the nature of the research and what I would be asked to do as a participant. I understand that the research is for a student project and that the confidentiality of the information I provide will be safeguarded unless subject to any legal requirements. S/he has discussed the contents of the information sheet with me and given me the opportunity to ask questions about it.

I agree to take part in this research and I understand that I am free to withdraw at any time without giving any reason.

_____

Adolescent's Name

_____

Teacher's Name

_____ _____

Teacher's Signature Date

Appendix H

Participant Information Sheet For Adolescents

You are invited to take part in a study as part of my research at the University of Edinburgh, Moray House School of Education in the UK. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information.

Thank you for reading this.

Who will conduct the research?

Researcher's name: Siti Norhedayah Bte Abdul Latif, who is currently a PhD candidate at The University of Edinburgh, UK.

Title of the Research

Evaluation of the Malay version of Strength and Difficulties Questionnaires: Psychometric properties and potential as a screening tool for adolescent in Brunei with emotional and behavioural problems.

What is the aim of the research?

The main aim of this research is to evaluate the psychometric properties of the Strength and Difficulties Questionnaires (SDQ) of the Malay version and to report for the prevalence rate of the emotional and behavioural problems among adolescents in Brunei Darussalam. Related aims of this study is to provide statistical evidence for stakeholders and policy makers in addressing the local context regarding the increasing number of adolescents who are suffering from emotional and behavioural problems in Brunei. Moreover, this research will provide international evidence on the utilisation of the standarised assessment tool for identifying emotional and behavioural problems within the context of Brunei.

Why have I been chosen?

You are randomly chosen to participate in this research by the researcher. Your report is considered valuable in helping me to understand the nature of emotional and behavioural problems among adolescents and evaluating the assessment tool.

What would I be asked to do if I took part?

You will be required to answer the questionnaire base on how things have been for you over the last six months.

What happen to the data collected?

The data will be keyed into a SPSS program. All the data will be analysed and studied looking at the statistical report of the findings.

How is confidentiality maintained?

The researcher will maintain confidentiality of all the participants' data and no third person will be involved. All the name of participants will be anonymous. The data and results obtained from the research will only be used in the way(s) for which consent has been given and this is the important part of the Data Protection rules for researchers.

What happen if I do not want to take part or if I change my mind?

It is up to you to decide whether or not to take part. However, this is a voluntary research undertaken to help me provide statistical evidence on the general well-being of the students in Brunei.

Where will the research be conducted?

Participant will fill in the questionnaire at his/her own free time and place. However, please submit this form as soon as possible once completed.

Will the outcomes of the research be published?

If the research is to be published, a letter informing you regarding it will be sent in advance. All the names of the participant will be anonymised as well as the name of the school.

If you have any queries regarding this study please contact Siti Norhedayah on +6738816896 or S.Abdul-Latif@sms.ed.ac.uk

Appendix I

Consent Form for Adolescents Taking Part in Student Research Projects

Title of Project: Evaluation of the Malay version of Strength and Difficulties Questionnaires: Psychometric properties and potential as a screening tool for adolescent in Brunei Darussalam with emotional and behavioural problems.

Name of Researcher BLOCK LETTERS: SITI NORHEDAYAH ABDUL LATIF

School: Moray House School of Education, University of Edinburgh.

Participant (volunteer)

Please read this carefully and if you are happy to proceed, sign below.

The researcher has given me a copy of the information sheet, which I have read and understood. The information sheet explains the nature of the research and what I would be asked to do as a participant. I understand that the research is for a student project and that the confidentiality of the information I provide will be safeguarded unless subject to any legal requirements. S/he has discussed the contents of the information sheet with me and given me the opportunity to ask questions about it.

I agree to take part in this research and I understand that I am free to withdraw at any time without giving any reason.

_____

Name

_____

_____

Signature Date

Appendix J

Sila tulis dengan jelas

SENARAI SEMAK TINGKAH LAKU KANAK-KANAK
BERUMUR 6 - 18 TAHUN

Untuk kegunaan pejabat

NAMA PENUH ANAK

JANTINA ANAK
☐ Lelaki
☐ Perempuan

UMUR ANAK

BANGSA ATAU KUMPULAN ETNIK ANAK

TARIKH HARI INI
Hari ___ Bln ___ Thn ___

TARIKH LAHIR ANAK
Hari ___ Bln ___ Thn ___

DARJAH / TINGKATAN_____

TIDAK BERSEKOLAH ☐

Sila isikan borang ini untuk memberi gambaran tentang tingkah laku anak anda walaupun orang lain mungkin tidak bersetuju dengan pandangan anda. Sila tuliskan ulasan tambahan di tepi setiap item sekiranya ada dan pada ruang yang disediakan di halaman 2. Pastikan semua item dijawab.

PEKERJAAN IBU BAPA (sekiranya tidak bekerja sekarang, nyatakan pekerjaan terakhir). (Nyatakan dengan jelas - contoh, mekanik kereta, guru sekolah rendah / menengah, suri rumahtangga, buruh, pekerja kilang, jurujual kasut, tentera)

PEKERJAAN BAPA:_____

PEKERJAAN IBU:_____

BORANG INI DIISI OLEH: (Tuliskan nama penuh anda dengan jelas)

_____

Jantina anda: ☐ Lelaki ☐ Perempuan

Hubungan anda dengan anak:

☐ Ibu bapa kandung ☐ Ibu bapa tiri ☐ Datuk atau Nenek

☐ Ibu bapa angkat ☐ Lain-lain (nyatakan)

I. **Sila senaraikan jenis sukan yang anak anda paling suka sertai**. Contohnya: bola sepak, bola baling, bola jaring, badminton dsb.

☐ TIADA

a. _____
b. _____
c. _____

Berbanding dengan kanak-kanak lain yang sama umur, berapa banyakkah masa yang dihabiskannya untuk setiap jenis sukan yang disertai?

	Sedikit	Sederhana	Banyak	Tidak tahu
a.	☐	☐	☐	☐
b.	☐	☐	☐	☐
c.	☐	☐	☐	☐

Berbanding dengan kanak-kanak lain yang sama umur, sejauh manakah pencapaiannya di dalam setiap jenis sukan yang disertai?

	Lemah	Sederhana	Baik	Tidak tahu
a.	☐	☐	☐	☐
b.	☐	☐	☐	☐
c.	☐	☐	☐	☐

II. **Sila senaraikan hobi, aktiviti, dan permainan kegemaran anak anda, selain daripada sukan**. Contohnya: mengumpul setem, bermain anak patung, piano, komputer, membaca buku, kraftangan, menyanyi, dsb (Tidak termasuk mendengar radio atau menonton TV)

☐ TIADA

a. _____
b. _____
c. _____

Berbanding dengan kanak-kanak lain yang sama umur, berapa banyakkah masa yang dihabiskannya untuk setiap hobi, aktiviti dan permainan ini?

	Sedikit	Sederhana	Banyak	Tidak tahu
a.	☐	☐	☐	☐
b.	☐	☐	☐	☐
c.	☐	☐	☐	☐

Berbanding dengan kanak-kanak lain yang sama umur, sejauh manakah pencapaiannya dalam setiap hobi, aktiviti dan permainan ini?

	Lemah	Sederhana	Baik	Tidak tahu
a.	☐	☐	☐	☐
b.	☐	☐	☐	☐
c.	☐	☐	☐	☐

III. **Sila senaraikan sebarang organisasi, kelab, pasukan atau kumpulan yang anak anda terlibat?**

☐ TIADA

a. _____
b. _____
c. _____

Berbanding dengan kanak-kanak lain yang sama umur, bagaimanakah keaktifan dia dalam setiap satu yang disertainya?

	Kurang aktif	Sederhana	Lebih aktif	Tidak tahu
a.	☐	☐	☐	☐
b.	☐	☐	☐	☐
c.	☐	☐	☐	☐

IV. **Sila senaraikan pekerjaan atau tugas harian yang perlu dilakukan oleh anak anda.** Contohnya: memasak, mencuci kereta, menyapu sampah, menjaga budak, mengemas katil, bekerja di kedai, dsb (Termasuklah kerja bergaji / tidak bergaji dan tugas harian)

☐ TIADA

a. _____
b. _____
c. _____

Berbanding dengan kanak-kanak lain yang sama umur, sebaik manakah dia melakukan semua tugas itu?

	Kurang baik	Sederhana	Baik	Tidak tahu
a.	☐	☐	☐	☐
b.	☐	☐	☐	☐
c.	☐	☐	☐	☐

Pastikan anda menjawab semua item. Kemudian lihat halaman sebelah.

SALINAN TANPA KEBENARAN ADALAH SATU KESALAHAN

MUKASURAT 1

V. 1. Berapa orangkah kawan baik anak anda? (Tidak termasuk adik-beradik)

☐ Tiada ☐ 1 ☐ 2 atau 3 ☐ 4 atau lebih

2. Berapa kalikah dalam seminggu, anak anda melakukan aktiviti bersama-sama dengan kawannya di luar waktu persekolahan? (Tidak termasuk adik-beradik)

☐ Kurang daripada 1 ☐ 1 atau 2 ☐ 3 atau lebih

VI Dibandingkan dengan kanak-kanak lain yang sama umur dengannya, sebaik manakah:

	Kurang baik	Sederhana	Lebih baik	
a. Perhubungannya dengan adik-beradik?	☐	☐	☐	☐ Tiada adik-beradik
b. Perhubungan dengan kanak-kanak lain?	☐	☐	☐	
c. Kelakuannya dengan ibu bapa?	☐	☐	☐	
d. Dia bermain dan bekerja sendirian?	☐	☐	☐	

VII. Prestasi akademik ☐ Tidak bersekolah kerana _____

_____

Matapelajaran (Contoh: kursus komputer dan bahasa asing. Tidak termasuk taekwando atau matapelajaran bukan akademik yang lain.).

Tandakan di kotak untuk setiap matapelajaran yang diambil oleh anak anda:	Gagal	Lemah	Sederhana	Baik
a. Bahasa Malaysia	☐	☐	☐	☐
b. Bahasa Inggeris	☐	☐	☐	☐
c. Matematik	☐	☐	☐	☐
d. _____	☐	☐	☐	☐
e. _____	☐	☐	☐	☐
f. _____	☐	☐	☐	☐
g. _____	☐	☐	☐	☐

2. Adakah anak anda menerima pendidikan khas atau perkhidmatan pemulihan? ☐ Tidak ☐ Ya - Jenis khidmat, kelas atau sekolah:

3. Pernahkah anak anda mengulang kelas? ☐ Tidak ☐ Ya - kelas dan sebabnya:

4. Pernahkah anak anda menghadapi apa-apa masalah akademik atau masalah lain di sekolah? ☐ Tidak ☐ Ya - sila terangkan:

Bilakah masalah ini bermula? _____

Adakah masalah ini sudah berakhir? ☐ Tidak ☐ Ya - bila? _____

Adakah anak anda mengalami sebarang penyakit atau kecacatan (fizikal atau mental)?

Apakah perkara yang paling dirisaukan tentang anak anda?

Nyatakan keistimewaan / kebolehan anak anda.

Pastikan anda menjawab semua item.

Appendix K

Soal Selidik Kekuatan Dan Kesusahan (SDQ-Mal)

Bagi setiap perkara dibawah, sila tandakan petak Tidak Benar, Sedikit Benar, atau Memang Benar. Anda boleh membantu kami jika anda dapat menjawab semua perkara sebaik baiknya yang boleh walaupun anda tidak pasti atau perkara itu nampak bodoh. Sila beri jawapan anda berasaskan kelakuan kanak-kanak itu dalam masa sebulan yang lalu.

Nama kanak-kanak ..... Lelaki/Perempuan

Tarikh lahir .....

	Tidak Benar	Sedikit Benar	Memang Benar
Bertimbang rasa terhadap perasaan orang lain.	☐	☐	☐
Gelisah, terlalu aktif, tidak dapat diam untuk masa yang panjang.	☐	☐	☐
Selalu mengadu sakit kepala, sakit perut, atau berpenyakit.	☐	☐	☐
Sedia berkongsi dengan kanak lain (belanja, permainan, pensil)	☐	☐	☐
Selalu naik marah atau pemarah.	☐	☐	☐
Bersendirian, lebih suka bermain seorang diri.	☐	☐	☐
Biasanya taat, melakukan apa yang dikehendaki oleh orang dewasa.	☐	☐	☐
Banyak kebimbangan, selalu nampak bimbang.	☐	☐	☐
Suka menolong jika seseorang cedera, rasa terganggu atau tidak sihat.	☐	☐	☐
Sentiasa bergerak dengan resah atau mengeliat geliut.	☐	☐	☐
Ada sekurang kurangnya seorang kawan baik.	☐	☐	☐
Selalu bergaduh dengan kanak-kanak lain atau membuli mereka.	☐	☐	☐
Selalu tidak gembira, susah hati atau menangis.	☐	☐	☐
Biasanya disukai oleh kanak-kanak lain.	☐	☐	☐
Mudah mengalih perhatian, penumpuan melayang layang.	☐	☐	☐
Gelisah atau lekat dengan orang dalam situasi baru, mudah hilang keyakinan.	☐	☐	☐
Baik kepada kanak-kanak yang lebih muda.	☐	☐	☐
Selalu berbohong atau menipu.	☐	☐	☐
Dibuli oleh kanak-kanak lain.	☐	☐	☐
Menawarkan secara sukarela pertolongan kepada orang lain (ibubapa guru, kanak-kanak lain)	☐	☐	☐
Berfikir sebelum bertindak.	☐	☐	☐
Mencuri daripada rumah, sekolah atau lain lain tempat.	☐	☐	☐
Mudah berbaik-baik dengan orang dewasa daripada kanak-kanak.	☐	☐	☐
Banyak ketakutan, mudah takut.	☐	☐	☐
Membuat tugas dari awal hingga ke akhir, jangka masa perhatian baik.	☐	☐	☐

Tandatangan ..... Tarikh .....

Ibubapa/guru/lain lain (nyatakan):

Terima kasih atas bantuan anda

Appendix L

Sila tulis dengan jelas. Pastikan semua item dijawab.

Di bawah ini ialah senarai item yang menggambarkan tentang remaja. Untuk item yang menggambarkan tentang anda pada masa sekarang atau dalam masa enam bulan yang lalu, sila bulatkan **2** sekiranya item itu ***sangat benar*** atau ***selalunya benar*** tentang anda. Bulatkan **1** sekiranya item ini ***agak*** atau ***kadang-kadang benar*** mengenai anda. Sekiranya item itu ***tidak benar*** kepada anda, bulatkan **0**.

0 = Tidak benar 1 = Agak atau kadang-kadang benar 2 = Sangat benar atau selalunya benar

0 1 2	1.	Saya bertindak tidak matang berbanding dengan umur saya
0 1 2	2.	Saya minum alkohol tanpa kebenaran ibu bapa (jelaskan):_____
0 1 2	3.	Saya selalu bertengkar
0 1 2	4.	Saya gagal menyiapkan kerja yang dimulakan
0 1 2	5.	Tidak banyak perkara yang membuat saya seronok
0 1 2	6.	Saya suka binatang
0 1 2	7.	Saya bercakap besar
0 1 2	8.	Saya susah memberikan tumpuan atau perhatian untuk masa yang lama
0 1 2	9.	Saya tidak dapat berhenti dari memikirkan perkara tertentu (jelaskan):_____
0 1 2	10.	Saya susah untuk duduk diam
0 1 2	11.	Saya terlalu bergantung pada orang dewasa
0 1 2	12.	Saya berasa sunyi
0 1 2	13.	Saya keliru atau bingung
0 1 2	14.	Saya banyak menangis
0 1 2	15.	Saya agak jujur
0 1 2	16.	Saya berkelakuan buruk terhadap orang lain
0 1 2	17.	Saya banyak berkhayal
0 1 2	18.	Saya sengaja mencederakan diri sendiri atau cuba bunuh diri
0 1 2	19.	Saya cuba dapatkan banyak perhatian
0 1 2	20.	Saya rosakkan barang saya sendiri
0 1 2	21.	Saya rosakkan barang orang lain
0 1 2	22.	Saya tidak mematuhi ibu bapa saya
0 1 2	23.	Saya tidak mematuhi arahan di sekolah
0 1 2	24.	Saya kurang selera makan seperti yang sepatutnya
0 1 2	25.	Saya susah bergaul dengan budak-budak lain
0 1 2	26.	Saya tidak berasa bersalah selepas berbuat sesuatu yang tidak patut saya lakukan
0 1 2	27.	Saya cemburu terhadap orang lain
0 1 2	28.	Saya melanggar peraturan di rumah, sekolah, atau tempat lain
0 1 2	29.	Saya takut binatang tertentu, situasi, atau tempat selain sekolah (jelaskan) _____ _____
0 1 2	30.	Saya takut pergi ke sekolah
0 1 2	31.	Saya bimbang kalau saya terfikir atau melakukan sesuatu yang buruk
0 1 2	32.	Saya berasa saya perlu jadi orang yang sempurna
0 1 2	33.	Saya berasa bahawa tiada sesiapa yang menyayangi saya
0 1 2	34.	Saya berasa orang lain hendak mengenakan saya
0 1 2	35.	Saya berasa tidak berguna atau rendah diri
0 1 2	36.	Saya selalu tercedera secara tidak sengaja
0 1 2	37.	Saya terlibat dalam banyak pergaduhan
0 1 2	38.	Saya kerap diejek
0 1 2	39.	Saya melepak dengan budak-budak yang bermasalah
0 1 2	40.	Saya mendengar bunyi atau suara yang orang lain berpendapat tidak wujud (jelaskan): _____
0 1 2	41.	Saya bertindak tanpa berfikir terlebih dahulu
0 1 2	42.	Saya lebih senang bersendirian daripada bersama dengan orang lain
0 1 2	43.	Saya berbohong atau menipu
0 1 2	44.	Saya suka menggigit kuku
0 1 2	45.	Saya resah atau tertekan
0 1 2	46.	Bahagian tertentu tubuh saya terketar-ketar gemuruh (jelaskan): _____
0 1 2	47.	Saya mengalami mimpi ngeri
0 1 2	48.	Saya tidak disukai oleh budak-budak lain
0 1 2	49.	Saya boleh melakukan perkara tertentu lebih baik daripada kebanyakan budak-budak lain
0 1 2	50.	Saya berasa terlalu takut atau bimbang
0 1 2	51.	Saya berasa pening
0 1 2	52.	Saya berasa terlalu bersalah
0 1 2	53.	Saya makan terlalu banyak
0 1 2	54.	Saya berasa terlalu letih tanpa sebab yang munasabah
0 1 2	55.	Berat badan saya berlebihan
0 1 2	56.	Masalah kesihatan fizikal tanpa sebab-sebab perubatan yang diketahui: _____
0 1 2	a.	Sengal atau sakit-sakit (bukan sakit perut atau sakit kepala)
0 1 2	b.	Sakit kepala
0 1 2	c.	Loya, rasa hendak muntah
0 1 2	d.	Masalah mata (bukan jenis yang dapat diatasi dengan memakai cermin mata) (jelaskan): _____
0 1 2	e.	Ruam atau masalah kulit yang lain
0 1 2	f.	Sakit perut
0 1 2	g.	Muntah
0 1 2	h.	Lain-lain (jelaskan): _____

Pastikan anda menjawab semua item.
Kemudian lihat halaman sebelah.

Pastikan anda menjawab semua item.

0 = Tidak benar **1 = Agak atau kadang-kadang benar** **2 = Sangat benar atau selalunya benar**

0 1 2 57. Saya menyerang orang secara fizikal

0 1 2 58. Saya mengutil-ngutil kulit atau bahagian tubuh yang lain (jelaskan): _____

0 1 2 59. Saya boleh jadi agak peramah

0 1 2 60. Saya suka mencuba sesuatu yang baru

0 1 2 61. Saya lemah dalam kerja sekolah

0 1 2 62. Saya mempunyai kordinasi pergerakan yang tidak memuaskan

0 1 2 63. Saya lebih suka bersama dengan budak-budak yang lebih tua daripada yang sebaya

0 1 2 64 . Saya lebih suka bersama dengan budak-budak yang lebih muda, daripada yang sebaya

0 1 2 65. Saya enggan bercakap

0 1 2 66. Saya mengulangi sesuatu tingkah laku berkali-kali (jelaskan): _____

0 1 2 67. Saya lari dari rumah

0 1 2 68. Saya kuat menjerit

0 1 2 69. Saya suka berahsia dan tidak menceritakan kepada orang lain

0 1 2 70. Saya nampak sesuatu yang orang lain berpendapat tidak wujud (jelaskan): _____

0 1 2 71. Saya terlalu memikirkan tanggapan orang lain tentang saya atau mudah merasa malu

0 1 2 72. Saya suka memulakan kebakaran

0 1 2 73. Saya cekap dalam kerja-kerja tangan

0 1 2 74. Saya bersikap menunjuk-nunjuk

0 1 2 75. Saya sangat pemalu atau penakut

0 1 2 76. Saya tidur kurang daripada kebanyakan budak-budak lain

0 1 2 77. Saya tidur lebih daripada kebanyakan budak-budak lain pada siang hari dan/atau malam (jelaskan): _____

0 1 2 78. Saya sukar memberikan tumpuan atau mudah beralih perhatian

0 1 2 79. Saya mempunyai masalah pertuturan (jelaskan): _____

0 1 2 80. Saya mempertahankan hak-hak saya

0 1 2 81. Saya mencuri di rumah

0 1 2 82. Saya mencuri di tempat lain selain dari rumah sendiri

0 1 2 83. Saya menyimpan terlalu banyak barang-barang yang tidak saya perlukan (jelaskan): _____

_____

0 1 2 84. Saya melakukan sesuatu yang dianggap ganjil oleh orang lain (jelaskan): _____

_____

0 1 2 85. Saya mempunyai pemikiran yang dianggap ganjil oleh orang lain (jelaskan): _____

_____

0 1 2 86. Saya seorang yang degil

0 1 2 87. Perasaan saya berubah dengan tiba-tiba

0 1 2 88. Saya seronok bila bersama dengan orang lain

0 1 2 89. Saya curiga / syak

0 1 2 90. Saya menyumpah atau mencarut

0 1 2 91. Saya terfikir untuk membunuh diri

0 1 2 92. Saya suka membuat orang lain ketawa

0 1 2 93. Saya terlalu banyak bercakap

0 1 2 94. Saya banyak mengejek orang

0 1 2 95. Saya panas baran / cepat marah

0 1 2 96. Saya banyak berfikir tentang seks

0 1 2 97. Saya mengugut untuk mencederakan orang

0 1 2 98. Saya suka membantu orang lain

0 1 2 99. Saya merokok, mengunyah atau menghidu tembakau

0 1 2 100. Saya ada masalah tidur (jelaskan): _____

_____

0 1 2 101. Saya ponteng kelas atau ponteng sekolah

0 1 2 102. Saya kurang bertenaga

0 1 2 103. Saya tidak gembira, sedih atau murung

0 1 2 104. Saya lebih bising daripada budak-budak lain

0 1 2 105. Saya mengambil dadah, bukan untuk tujuan perubatan (tidak termasuk alkohol atau rokok) (jelaskan): _____

0 1 2 106. Saya suka bersikap adil kepada orang lain

0 1 2 107. Saya seronok mendengar jenaka yang kelakar

0 1 2 108. Saya suka kehidupan yang mudah

0 1 2 109. Saya cuba membantu orang lain jika boleh

0 1 2 110. Saya ingin menjadi jantina yang berlawanan dari jantina asal saya

0 1 2 111. Saya mengelakkan diri daripada bergaul dengan orang lain

0 1 2 112. Saya banyak runsing

Sila tuliskan lain-lain perkara yang menggambarkan perasaan, tingkah laku atau minat anda:

Diterjemah oleh: Dr. Tuti Iryani Mohd. Daud, Dr. Nik Ruzyanei Nik Jaafar, Dr. Juslina Omar, Dr. Wan Salwina Wan Ismail, Puan Loh Sit Fong, Dr. Zasmani Shafie, Dr. Ramli Musa, Dr. Fairuz Nazri Abd. Rahman, Dr. Rozhan Radhi, Puan Jamaliah Jamaluddin, Puan Mazianafida Othman
Disusun atur oleh: Muzain Minudin Yahaya

Appendix M

Sila tulis dengan jelas. Pastikan semua item dijawab.

Di bawah ini ialah senarai item yang menggambarkan tentang anak anda. Untuk item yang menggambarkan tentang anak anda pada masa sekarang atau dalam masa enam bulan yang lalu, sila bulatkan **2** sekiranya item itu ***sangat benar*** atau ***selalunya benar*** tentang anak anda. Bulatkan **1** sekiranya item ini ***agak*** atau ***kadang-kadang benar*** mengenai anak anda. Sekiranya item itu ***tidak benar*** kepada anak anda, bulatkan **0.**

0 = Tidak benar 1 = Agak atau kadang-kadang benar 2 = Sangat benar atau selalunya benar

0 1 2 1. Bertindak tidak matang berbanding dengan umurnya

0 1 2 2. Mengambil minuman alkohol tanpa kebenaran ibu bapa (jelaskan): _____

0 1 2 3. Selalu bertengkar

0 1 2 4. Gagal menyiapkan kerja yang dimulakan

0 1 2 5. Tidak banyak perkara yang membuat dia seronok

0 1 2 6. Membuang air besar di luar tandas

0 1 2 7. Membangga diri, bercakap besar

0 1 2 8. Tidak dapat memberikan tumpuan atau perhatian untuk masa yang lama

0 1 2 9. Tidak dapat berhenti dari memikirkan perkara tertentu, obsesi (jelaskan) _____

_____

0 1 2 10. Tidak boleh duduk diam, gelisah, atau terlalu aktif

0 1 2 11. Selalu berpaut atau terlalu bergantung pada orang dewasa

0 1 2 12. Mengadu kesunyian

0 1 2 13. Kelihatan keliru atau bingung

0 1 2 14. Banyak menangis

0 1 2 15. Kejam terhadap binatang

0 1 2 16. Kejam, membuli atau menganiaya orang lain

0 1 2 17. Berkhayal atau asyik memikirkan sesuatu

0 1 2 18. Sengaja mencederakan diri sendiri atau cuba bunuh diri

0 1 2 19. Mahukan banyak perhatian

0 1 2 20. Merosakkan barang kepunyaan sendiri

0 1 2 21. Merosakkan barang keluarganya atau kepunyaan orang lain

0 1 2 22. Tidak mematuhi arahan di rumah

0 1 2 23. Tidak mematuhi arahan di sekolah

0 1 2 24. Kurang selera makan

0 1 2 25. Susah bergaul dengan budak-budak lain

0 1 2 26. Tidak berasa bersalah selepas berkelakuan tidak baik

0 1 2 27. Mudah cemburu

0 1 2 28. Melanggar peraturan di rumah, sekolah, atau tempat lain

0 1 2 29. Takut binatang tertentu, situasi, atau tempat selain sekolah (jelaskan) _____

0 1 2 30. Takut pergi ke sekolah

0 1 2 31. Bimbang kalau ia terfikir atau melakukan sesuatu yang buruk

0 1 2 32. Berasa dia perlu menjadi seorang yang sempurna

0 1 2 33. Berasa atau mengadu bahawa tiada orang menyayanginya

0 1 2 34. Berasa orang lain mengenakannya

0 1 2 35. Berasa tidak berguna atau rendah diri

0 1 2 36. Selalu tercedera, mudah kemalangan

0 1 2 37. Terlibat dalam banyak pergaduhan

0 1 2 38. Kerap diejek

0 1 2 39. Melepak dengan budak-budak yang bermasalah

0 1 2 40. Mendengar bunyi atau suara yang memang tidak wujud (jelaskan):_____

0 1 2 41. Bertindak tanpa berfikir terlebih dahulu

0 1 2 42. Lebih senang bersendirian daripada bersama dengan orang lain

0 1 2 43. Berbohong atau menipu

0 1 2 44. Menggigit kuku

0 1 2 45 Resah atau tertekan

0 1 2 46. Terketar-ketar gemuruh (jelaskan): _____

0 1 2 47. Mengalami mimpi ngeri

0 1 2 48. Tidak disukai oleh budak-budak lain

0 1 2 49. Sembelit, susah buang air besar

0 1 2 50. Berasa terlalu takut atau bimbang

0 1 2 51. Berasa pening

0 1 2 52. Berasa terlalu bersalah

0 1 2 53. Makan terlalu banyak

0 1 2 54. Berasa terlalu letih tanpa sebab yang munasabah

0 1 2 55. Berat badan yang berlebihan

0 1 2 56. Masalah kesihatan fizikal tanpa sebab-sebab perubatan yang diketahui:

0 1 2 a. Sengal atau sakit-sakit (bukan sakit perut atau sakit kepala)

0 1 2 b. Sakit kepala

0 1 2 c. Loya, rasa hendak muntah

0 1 2 d. Masalah mata (bukan jenis yang dapat diatasi dengan memakai cermin mata) (jelaskan): _____

_____

0 1 2 e. Ruam atau masalah kulit yang lain

0 1 2 f. Sakit perut

0 1 2 g. Muntah

0 1 2 h. Lain-lain (jelaskan):_____

_____

MUKASURAT 3

Pastikan anda menjawab semua item. Kemudian lihat halaman sebelah.

Pastikan anda menjawab semua item.

0 = Tidak benar **1 = Agak atau kadang-kadang benar** **2 = Sangat benar atau selalunya benar**

0 1 2 57. Menyerang orang secara fizikal

0 1 2 58. Mengorek hidung, mengutil kulit atau bahagian tubuh yang lain (jelaskan): _____

_____

0 1 2 59. Bermain-main dengan kemaluan sendiri di khalayak ramai

0 1 2 60. Terlalu banyak bermain-main dengan kemaluan sendiri

0 1 2 61. Lemah dalam kerja sekolah

0 1 2 62. Mempunyai kordinasi pergerakan yang tidak memuaskan

0 1 2 63. Lebih suka bersama-sama dengan budak-budak yang lebih tua

0 1 2 64. Lebih suka bersama-sama dengan budak-budak yang lebih muda

0 1 2 65. Enggan bercakap

0 1 2 66. Mengulangi sesuatu tingkah laku berkali-kali (jelaskan):_____

0 1 2 67. Lari dari rumah

0 1 2 68. Kuat menjerit

0 1 2 69. Suka berahsia dan tidak menceritakan kepada orang lain

0 1 2 70. Nampak sesuatu yang tidak wujud (jelaskan): _____

0 1 2 71. Terlalu memikirkan tanggapan orang lain tentang dirinya atau mudah merasa malu

0 1 2 72. Suka memulakan kebakaran

0 1 2 73. Masalah seks (jelaskan): _____

0 1 2 74. Menunjuk-nunjuk

0 1 2 75. Sangat pemalu atau penakut

0 1 2 76. Tidur kurang daripada kebanyakan budak-budak

0 1 2 77. Tidur lebih daripada kebanyakan budak-budak pada siang hari dan/atau malam (jelaskan)_____

_____

0 1 2 78. Sukar memberikan tumpuan atau mudah beralih perhatian

0 1 2 79. Masalah pertuturan (jelaskan):_____

_____

0 1 2 80. Merenung kosong

0 1 2 81. Mencuri di rumah

0 1 2 82. Mencuri di tempat lain selain dari rumah sendiri

0 1 2 83. Menyimpan terlalu banyak barang-barang yang tidak diperlukannya (jelaskan):_____

_____

0 1 2 84. Berkelakuan ganjil (jelaskan): _____

_____

0 1 2 85. Pemikiran ganjil (jelaskan):_____

0 1 2 86. Degil, bermuka masam, cepat marah

0 1 2 87. Perasaan berubah dengan tiba-tiba

0 1 2 88. Suka merajuk

0 1 2 89. Curiga / syak

0 1 2 90. Menyumpah atau mencarut

0 1 2 91. Menyatakan keinginan untuk membunuh diri

0 1 2 92. Bercakap atau berjalan sewaktu tidur (jelaskan): _____

0 1 2 93. Terlalu banyak bercakap

0 1 2 94. Banyak mengejek

0 1 2 95. Panas baran / cepat marah

0 1 2 96. Terlalu banyak berfikir tentang seks

0 1 2 97. Mengugut orang lain

0 1 2 98. Menghisap jari

0 1 2 99. Merokok, mengunyah atau menghidu tembakau

0 1 2 100. Masalah tidur (jelaskan): _____

0 1 2 101. Ponteng sekolah

0 1 2 102. Kurang cergas, lambat bergerak, kurang bertenaga

0 1 2 103. Tidak gembira, sedih atau murung

0 1 2 104. Lebih bising daripada budak-budak lain

0 1 2 105 Mengambil dadah bukan untuk tujuan perubatan (tidak termasuk alkohol atau rokok) (jelaskan): _____

0 1 2 106. Vandalisme / merosakkan harta awam

0 1 2 107. Kencing dalam seluar pada siang hari

0 1 2 108. Kencing semasa tidur

0 1 2 109. Merengek / merungut

0 1 2 110. Ingin menjadi jantina yang berlawanan dari jantina asal

0 1 2 111. Mengasingkan diri, tidak bergaul dengan orang lain

0 1 2 112. Runsing atau bimbang

0 1 2 113. Sila tuliskan apa-apa masalah yang dihadapi oleh anak anda yang tidak tersenarai di atas:

0 1 2 _____

0 1 2 _____

0 1 2 _____

Pastikan anda menjawab semua item

Diterjemah oleh: Dr. Tuti Iryani Mohd. Daud, Dr. Wan Salwina Wan Ismail, Puan Loh Sit Fong, Dr. Nik Ruzyanei Nik Jaafar, Dr. Zasmani Shafie, Dr. Ramli Musa, Dr. Fairuz Nazri Abd. Rahman, Dr. Rozhan Radhi, Puan Jamaliah Jamaluddin, Puan Mazianafida Othman
Disusun atur oleh: Encik Muzain Minudin Yahaya

Appendix N

Sila tulis dengan jelas. Pastikan semua item dijawab.

Di bawah ini ialah senarai item yang menggambarkan tentang pelajar. Untuk item yang menggambarkan tentang pelajar ini **pada masa sekarang atau dalam masa 2 bulan yang lalu**, sila bulatkan **2** sekiranya item itu **sangat benar** atau **selalunya benar** tentang pelajar ini. Bulatkan **1** sekiranya item ini **agak** atau **kadang-kadang benar** mengenai pelajar ini. Sekiranya item itu **tidak benar** tentang pelajar ini, bulatkan **0**. Sila jawab semua item sebaik mungkin, walaupun sesetengahnya tidak berkaitan dengan pelajar ini.

0 = Tidak benar (Setakat yang anda tahu) **1 = Agak atau kadang-kadang benar** **2 = Sangat benar atau selalunya benar**

0 1 2 1. Bertindak tidak matang berbanding dengan umurnya
0 1 2 2. Berlagu atau membuat bunyi-bunyian ganjil dalam kelas
0 1 2 3. Selalu bertengkar
0 1 2 4. Gagal menyiapkan kerja yang dimulakan
0 1 2 5. Tidak banyak perkara yang membuat dia seronok
0 1 2 6. Ingkar, melawan cakap kakitangan sekolah
0 1 2 7. Membangga diri, bercakap besar
0 1 2 8. Tidak dapat memberikan tumpuan atau perhatian untuk masa yang lama
0 1 2 9. Tidak dapat berhenti dari memikirkan perkara tertentu, obsesi (jelaskan):_____
_____
0 1 2 10. Tidak boleh duduk diam, gelisah, atau terlalu aktif
0 1 2 11. Selalu berpaut atau terlalu bergantung pada orang dewasa
0 1 2 12. Mengadu kesunyian
0 1 2 13. Kelihatan keliru atau bingung
0 1 2 14. Banyak menangis
0 1 2 15. Tidak duduk diam
0 1 2 16. Kejam, membuli atau menganiaya orang lain
0 1 2 17. Berkhayal atau asyik memikirkan sesuatu
0 1 2 18. Sengaja mencederakan diri sendiri atau cuba bunuh diri
0 1 2 19. Mahukan banyak perhatian
0 1 2 20. Merosakkan barang kepunyaan sendiri
0 1 2 21. Merosakkan harta benda orang lain
0 1 2 22. Sukar mengikut arahan
0 1 2 23. Tidak mematuhi arahan di sekolah
0 1 2 24. Mengganggu pelajar lain
0 1 2 25. Tidak serasi bergaul dengan pelajar lain
0 1 2 26. Tidak berasa bersalah selepas berkelakuan tidak baik
0 1 2 27. Mudah cemburu
0 1 2 28. Melanggar peraturan sekolah
0 1 2 29. Takut binatang tertentu, situasi, atau tempat selain sekolah (jelaskan): _____
_____
0 1 2 30. Takut pergi ke sekolah
0 1 2 31. Bimbang kalau ia terfikir atau melakukan sesuatu yang buruk.
0 1 2 32. Berasa dia perlu menjadi seorang yang sempurna
0 1 2 33. Berasa atau mengadu bahawa tiada orang menyanyanginya
0 1 2 34. Berasa orang lain mengenakannya
0 1 2 35. Berasa diri tidak berguna atau rendah diri
0 1 2 36. Selalu tercedera, mudah kemalangan
0 1 2 37. Terlibat dalam banyak pergaduhan
0 1 2 38. Kerap diejek
0 1 2 39. Melepak dengan budak-budak yang bermasalah
0 1 2 40. Mendengar bunyi atau suara yang memang tidak wujud (jelaskan: _____
_____
0 1 2 41. Bertindak tanpa berfikir dahulu
0 1 2 42. Lebih senang bersendirian daripada bersama dengan orang lain
0 1 2 43. Berbohong atau menipu
0 1 2 44. Menggigit kuku
0 1 2 45. Resah atau tertekan
0 1 2 46. Terketar-ketar gemuruh (jelaskan):_____
_____
_____
0 1 2 47. Terlalu mematuhi peraturan
0 1 2 48. Tidak disukai oleh pelajar lain
0 1 2 49. Mengalami kesukaran belajar
0 1 2 50. Berasa terlalu takut atau bimbang
0 1 2 51. Berasa pening
0 1 2 52. Berasa terlalu bersalah
0 1 2 53. Suka mencelah atau menyampuk
0 1 2 54. Berasa terlalu letih tanpa sebab yang munasabah
0 1 2 55. Berat badan yang berlebihan
0 1 2 56. Masalah kesihatan fizikal **tanpa sebab-sebab perubatan yang diketahui:**
0 1 2 a. Sengal atau sakit-sakit (bukan sakit perut atau sakit kepala)
0 1 2 b. Sakit kepala
0 1 2 c. Loya, rasa hendak muntah
0 1 2 d. Masalah mata (bukan jenis yang dapat diatasi dengan memakai cermin mata) (jelaskan) _____
_____
0 1 2 e. Ruam atau masalah kulit yang lain
0 1 2 f. Sakit perut
0 1 2 g. Muntah
0 1 2 h. Lain-lain (jelaskan): _____
_____
_____

Pastikan anda menjawab semua item. Kemudian, sila lihat halaman sebelah

0 = Tidak benar (setakat yg anda tahu) 1 = Agak atau kadang-kadang benar 2 = Sangat benar atau selalunya benar

0 1 2 57. Menyerang orang secara fizikal

0 1 2 58. Mengorek hidung, mengutil kulit atau bahagian tubuh yang lain (jelaskan):_____

_____

0 1 2 59. Tidur dalam kelas

0 1 2 60. Tidak bersemangat atau tidak ada motivasi

0 1 2 61. Lemah dalam kerja sekolah

0 1 2 62. Mempunyai kordinasi pergerakan yg tidak memuaskan

0 1 2 63. Lebih suka bergaul dengan budak-budak yang lebih tua

0 1 2 64. Lebih suka bergaul dengan budak-budak yang lebih muda

0 1 2 65. Enggan bercakap

0 1 2 66. Mengulangi sesuatu tingkah laku berkali-kali (jelaskan):_____

_____

0 1 2 67. Mengganggu disiplin / ketenteraman kelas

0 1 2 68. Kuat menjerit

0 1 2 69. Suka berahsia dan tidak menceritakan kepada orang lain

0 1 2 70. Nampak sesuatu yang tidak wujud (jelaskan): _____

_____

0 1 2 71. Terlalu memikirkan tanggapan orang lain tentang dirinya atau mudah merasa malu

0 1 2 72. Kerja yang tidak kemas

0 1 2 73. Berkelakuan tidak bertanggungjawab (jelaskan): _____

_____

0 1 2 74. Menunjuk-nunjuk atau melawak

0 1 2 75. Sangat pemalu atau penakut

0 1 2 76. Mengamuk atau berkelakuan yang tidak dijangka

0 1 2 77. Kemahuan mesti segera dipenuhi, mudah kecewa

0 1 2 78. Sukar memberikan tumpuan atau mudah beralih perhatian

0 1 2 79. Masalah pertuturan (jelaskan):_____

_____

0 1 2 80. Merenung kosong

0 1 2 81. Merasa tersinggung bila dikritik

0 1 2 82. Mencuri

0 1 2 83. Menyimpan terlalu banyak barang-barang yang tidak diperlukannya (jelaskan): _____

_____

_____

0 1 2 84. Berkelakuan ganjil (jelaskan):_____

_____

0 1 2 85. Pemikiran ganjil (jelaskan): _____

_____

0 1 2 86. Degil, bermuka masam, cepat marah

0 1 2 87. Perasaan berubah dengan tiba-tiba

0 1 2 88. Suka merajuk

0 1 2 89. Curiga /syak

0 1 2 90. Menyumpah atau mencarut

0 1 2 91. Menyatakan keinginan untuk membunuh diri

0 1 2 92. Pencapaian yang kurang dari tahap potensi diri

0 1 2 93. Terlalu banyak bercakap

0 1 2 94. Banyak mengejek

0 1 2 95. Panas baran / cepat marah

0 1 2 96. Kelihatan seperti selalu memikirkan tentang seks

0 1 2 97. Mengugut orang lain

0 1 2 98. Lewat ke sekolah atau lewat masuk kelas

0 1 2 99. Merokok, mengunyah atau menghidu tembakau

0 1 2 100. Gagal membuat tugasan yang diberi

0 1 2 101. Ponteng sekolah atau tidak hadir tanpa sebab

0 1 2 102. Kurang cergas, lambat bergerak, kurang bertenaga

0 1 2 103. Tidak gembira, sedih atau murung

0 1 2 104. Lebih bising daripada budak-budak lain

0 1 2 105. Mengambil dadah bukan untuk tujuan perubatan (tidak termasuk rokok) (jelaskan):_____

_____

_____

0 1 2 106. Terlalu ingin memuaskan hati orang

0 1 2 107. Tidak suka sekolah

0 1 2 108. Takut membuat kesilapan

0 1 2 109. Merengek / merungut

0 1 2 110. Penampilan diri yang tidak bersih

0 1 2 111. Mengasingkan diri, tidak bergaul dengan orang lain

0 1 2 112. Runsing atau bimbang

113. Sila tuliskan apa-apa masalah yang dihadapi oleh pelajar ini, yang tidak tersenarai di atas:

0 1 2 _____

0 1 2 _____

0 1 2 _____

Pastikan anda menjawab semua item.

Diterjemah oleh: Dr. Nik Ruzyanei Nik Jaafar, Dr. Fairuz Nazri Abd. Rahman, Dr. Tuti Iryani Mohd. Daud, Puan Loh Sit Fong, Dr. Wan Salwina Wan Ismail, Dr. Umi Adzlin Silim, Dr. Zasmani Shafie, Dr. Ramli Musa, Dr. Rozhan Radhi, Puan Jamaliah, Puan Mazianafida.

Appendix O

The University of Vermont
ASEBA
Research Center for Children, Youth & Families, Inc.
A Non-Profit Corporation
1 South Prospect Street, St Joseph's Wing (Room #3207), Burlington, VT 05401
Telephone: (802)656-5130 / Fax: (802)656-5131
Email: mail@aseba.org / Website: http://www.aseba.org

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(b) Dates or times by which Licensor is required to make performance under this Agreement shall be postponed automatically to the extent that Licensor is prevented from meeting them by causes beyond its reasonable control.

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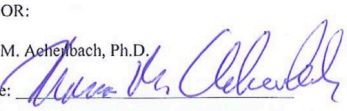
Signature: 

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Date: 6. November 2012

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Accepted and Agreed to:

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Siti Norhedayah Abdul Latif

Signature: 

Print name: Siti Norhedayah Abdul Latif

Title: Research Student (PhD)

Address: 11/9 Huntingdon Place
Edinburgh EH7 4AX, UK.

Date: 5/11/2012

Appendix P

Research & Knowledge Exchange
MORAY HOUSE SCHOOL *of* EDUCATION

The University of Edinburgh
Old Moray House
Holyrood Road
Edinburgh EH8 8AQ

Direct Dial 0131 651 6388
Switchboard 0131 650 1000
Email rke-education@ed.ac.uk
http://www.ed.ac.uk

Siti Latif
c/o Lorrain Denholm
PhD/EdD Secretary
Room 1.01
Thomson's Land

13 December 2012

Dear Siti

Evaluation of the Malay version of Strength and Difficulties Questionnaires: Psychometric properties and potential as a screening tool for adolescents in Brunei Darussalam with emotional and behavioural problems

The School of Education Ethics Sub-Committee has now considered your request for ethical approval for the studies detailed in the your application.

This is to confirm that the Sub-Committee is happy to approve the application and that the research meets the School Ethics Level 2 criterion. This is defined as"covering novel procedures or the use of atypical participant groups – usually projects in which ethical issues might require more detailed consideration but were unlikely to prove problematic".

A standard condition of this ethical approval is that you are required to notify the Committee, of any significant proposed deviation from the original protocol. The Committee also needs to be notified if there are any unexpected results or events once the research is underway that raise questions about the safety of the research.

Yours sincerely

S Cunningham

pp Dr S Bayne
Convener, School Ethics Sub-Committee